

1997 Consumption and Expenditures Tables

Total Consumption Tables

(23 pages, 88 kb)

Contents

Pages

CE1-1c. Total Energy Consumption in U.S. Households by Climate Zone, 1997	2
CE1-2c. Total Energy Consumption in U.S. Households by Year of Construction, 1997	2
CE1-3c. Total Energy Consumption in U.S. Households by Household Income, 1997	2
CE1-4c. Total Energy Consumption in U.S. Households by Type of Housing Unit, 1997	2
CE1-5u. Total Energy Consumption and Expenditures in U.S. Households by Household Demographics, 1997	1
CE1-6u. Total Energy Consumption and Expenditures in U.S. Households by Usage Indicators, 1997	2
CE1-7c. Total Energy Consumption in U.S. Households by Four Most Populated States, 1997	2
CE1-8c. Total Energy Consumption in U.S. Households by Urban/Rural Location, 1997	2
CE1-9c. Total Energy Consumption in U.S. Households by Northeast Census Region, 1997	2
CE1-10c. Total Energy Consumption in U.S. Households by Midwest Census Region, 1997	2
CE1-11c. Total Energy Consumption in U.S. Households by South Census Region, 1997	2
CE1-12c. Total Energy Consumption in U.S. Households by West Census Region, 1997	2

These data are from the 1997 Residential Energy Consumption Survey (RECS) which provides information on the use of energy in residential housing units in the United States. The RECS is a national statistical survey that collects data for occupied primary housing units. RECS was first conducted in 1978; the sixth and most recent survey was conducted in 1997 RECS. The data were collected from a sample of 5,900 housing units statistically selected to represent the 101.5 million units in the United States. The 1997 data are available for the four Census regions, the nine Census divisions, and for the four most populous States--California, Florida, New York, and Texas.

Data provided here are in the public domain and may be reproduced without permission. Appropriate credit would be appreciated. A suggested citation is "U.S. Department of Energy, Energy Information Administration, *"A Look at Residential Energy Consumption in 1997."*

Electronic Products and Services

Users can view and download selected pages or entire reports, search for information, download data and analysis applications, and find out about new information products and services.

Contact: Robert Latta, Survey Manager (rlatta@eia.doe.gov)

World Wide Web: <http://www.eia.doe.gov/emeu/consumption>

Table CE1-1c. Total Energy Consumption in U.S. Households by Climate Zone, 1997

	Climate Zone ¹						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factor:	0.4	1.6	1.1	1.1	1.2	1.1	
Million Households							
Total U.S. Households	101.5	9.3	28.0	22.5	19.5	22.2	7.9
Number of Households, Fuels Used (more than one may apply):							
Electricity ²	101.4	9.2	28.0	22.5	19.5	22.2	7.9
Natural Gas	61.9	5.1	20.0	12.7	12.7	11.5	8.7
Fuel Oil	10.0	2.0	3.1	4.4	0.3	Q	17.2
Kerosene	3.5	0.4	0.8	0.9	0.9	0.4	19.1
LPG	8.1	1.4	1.9	1.6	1.7	1.4	23.3
Wood	15.0	2.0	3.3	3.5	3.4	2.9	11.5
Quadrillion Btu							
Total Btu Consumption, Fuels Used:							
Electricity							
Primary	10.72	0.88	2.53	2.43	1.88	3.00	8.1
Site	3.54	0.29	0.83	0.80	0.62	0.99	8.1
Natural Gas	5.28	0.56	2.26	1.07	0.72	0.67	10.6
Fuel Oil	1.01	0.22	0.35	0.42	0.02	Q	19.4
Kerosene	0.06	0.02	0.01	0.01	0.02	(*)	28.7
LPG	0.36	0.05	0.12	0.08	0.07	0.04	27.4
Wood	0.43	0.15	0.08	0.09	0.06	0.04	15.7
Total (excludes primary electricity and wood)	10.25	1.14	3.58	2.37	1.45	1.70	7.7
Physical Units							
Physical Units of Total Consumption, Fuels Used:							
Electricity (billion kWh)	1,037	85	245	235	182	290	8.1
Natural Gas (billion cf)	5,143	545	2,204	1,039	705	650	10.6
Fuel Oil (million gallons)	7,273	1,580	2,558	3,004	114	Q	19.4
Kerosene (million gallons)	437	120	98	80	124	15	28.7
LPG (million gallons)	3,937	584	1,293	866	782	412	27.4
Wood (million cords)	21.4	7.7	3.9	4.6	3.2	2.0	15.7
Million Btu per Household³							
Total Btu Consumption per Household, Fuels Used:							
Electricity							
Primary	105.6	95.5	90.2	107.9	96.5	135.1	3.3
Site	34.9	31.5	29.8	35.6	31.8	44.6	3.3
Natural Gas	85.3	109.7	113.3	84.1	57.1	58.2	3.7
Fuel Oil	101.2	109.0	113.1	94.0	60.6	Q	5.9
Kerosene	17.0	38.4	16.3	12.1	17.6	5.1	22.0
LPG	44.6	37.4	60.8	48.3	41.9	27.7	12.8
Wood	28.5	76.3	24.3	26.0	19.2	13.8	11.4
Total (excludes primary electricity and wood)	101.0	123.1	127.8	105.5	74.3	76.6	2.9

See footnotes at end of table.

Table CE1-1c. Total Energy Consumption in U.S. Households by Climate Zone, 1997 (Continued)

	Climate Zone ¹						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factor:	0.4	1.6	1.1	1.1	1.2	1.1	
Physical Units per Household³							
Physical Units of Total Consumption per Household, Fuels Used:							
Electricity (kWh)	10,219	9,235	8,727	10,437	9,334	13,072	3.3
Natural Gas (thousand cf)	83	107	110	82	56	57	3.7
Fuel Oil (gallons)	730	787	816	678	437	Q	5.9
Kerosene (gallons)	126	284	121	90	130	38	22.0
LPG (gallons)	488	410	666	529	458	304	12.8
Wood (cords)	1.4	3.8	1.2	1.3	1.0	0.7	11.4
Million Households							
Number of Households, Where the End Use Is:							
Space Heating ⁴	99.7	8.9	27.8	22.2	19.2	21.5	8.0
Electric Air-Conditioning ⁵	72.6	5.2	18.2	17.6	12.0	19.6	8.4
Water Heating ⁶	100.8	9.2	27.9	22.3	19.4	21.9	8.0
Refrigerators	101.3	9.2	28.0	22.5	19.5	22.1	7.9
Appliances	101.5	9.3	28.0	22.5	19.5	22.2	7.9
Quadrillion Btu							
Total Btu Consumption, Where the End Use Is:							
Space Heating	5.18	0.71	2.17	1.30	0.54	0.47	9.4
Electric Air-Conditioning	0.42	0.01	0.05	0.07	0.07	0.22	11.0
Water Heating	1.92	0.18	0.61	0.43	0.35	0.34	7.3
Refrigerators	0.46	0.04	0.11	0.10	0.08	0.13	7.2
Other Appliances and Lighting	2.27	0.20	0.64	0.48	0.40	0.54	7.4
Million Btu per Household³							
Total Btu Consumption per Household, Where the End Use Is:							
Space Heating	52.0	79.4	78.0	58.3	27.9	21.9	4.9
Electric Air-Conditioning	5.7	2.2	2.6	4.1	5.8	11.0	5.0
Water Heating	19.0	19.7	21.8	19.2	18.3	15.7	2.9
Refrigerators	4.5	3.9	4.1	4.3	4.3	5.8	2.3
Other Appliances and Lighting	22.4	21.9	22.9	21.4	20.6	24.4	2.5

¹ One of five climatically distinct areas, determined according to the 30-year average (1961-1990) of the annual heating and cooling degree-days. For this report, the heating or cooling degree-days are a measure of how cold or how hot a location is over a period of one year, relative to a base temperature of 65 degrees Fahrenheit. A household is assigned to a climate zone according to the 30-year average annual degree-days for an appropriate nearby weather station.

² The RECS cannot be used to accurately estimate the number of households that do not use electricity.

³ The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.

⁴ Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

⁵ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

⁶ Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

(*) = Value rounds to zero in the units displayed.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE1-2c. Total Energy Consumption in U.S. Households
by Year of Construction, 1997**

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ¹	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.8	1.3	1.0	1.1	1.1	0.8	
Million Households								
Total U.S. Households	101.5	9.7	17.3	19.6	14.4	12.5	27.9	4.2
Number of Households, Fuels Used (more than one may apply):								
Electricity ²	101.4	9.7	17.3	19.6	14.4	12.5	27.9	4.2
Natural Gas	61.9	5.2	7.5	9.5	9.6	9.2	20.9	6.1
Fuel Oil	10.0	0.3	0.6	1.0	1.5	1.5	5.0	14.6
Kerosene	3.5	0.2	0.5	0.8	0.4	0.3	1.4	18.4
LPG	8.1	0.9	1.2	1.7	1.1	0.7	2.5	14.0
Wood	15.0	1.6	3.7	3.4	2.2	1.4	2.8	9.8
Quadrillion Btu								
Total Btu Consumption, Fuels Used:								
Electricity								
Primary	10.72	1.25	2.23	2.42	1.41	1.17	2.23	4.5
Site	3.54	0.41	0.74	0.80	0.47	0.39	0.74	4.5
Natural Gas	5.28	0.43	0.56	0.74	0.73	0.77	2.05	7.3
Fuel Oil	1.01	0.03	0.06	0.09	0.14	0.15	0.54	16.8
Kerosene	0.06	(*)	0.01	0.01	0.01	(*)	0.03	30.5
LPG	0.36	0.04	0.05	0.07	0.04	0.02	0.13	16.9
Wood	0.43	0.03	0.08	0.08	0.06	0.03	0.15	15.0
Total (excludes primary electricity and wood)	10.25	0.92	1.41	1.71	1.39	1.33	3.48	4.5
Physical Units								
Physical Units of Total Consumption, Fuels Used:								
Electricity (billion kWh)	1,037	121	215	234	137	113	216	4.5
Natural Gas (billion cf)	5,143	418	545	724	712	747	1,998	7.3
Fuel Oil (million gallons)	7,273	214	439	657	1,001	1,093	3,869	16.7
Kerosene (million gallons)	437	26	53	83	45	30	200	30.5
LPG (million gallons)	3,937	465	556	716	492	249	1,460	16.9
Wood (million cords)	21.4	1.5	3.8	4.1	2.9	1.5	7.5	15.0
Million Btu per Household³								
Total Btu Consumption per Household, Fuels Used:								
Electricity								
Primary	105.6	129.3	128.7	123.8	97.8	93.4	80.0	2.7
Site	34.9	42.7	42.5	40.9	32.3	30.8	26.4	2.7
Natural Gas	85.3	82.1	74.2	78.5	76.1	83.6	98.2	3.6
Fuel Oil	101.2	98.1	103.2	88.4	89.6	99.7	107.9	7.1
Kerosene	17.0	19.7	14.2	14.9	15.5	14.3	19.7	26.5
LPG	44.6	48.3	43.6	38.6	40.9	31.0	53.3	10.2
Wood	28.5	18.9	21.0	23.9	26.8	23.1	53.2	12.4
Total (excludes primary electricity and wood)	101.0	94.6	81.7	87.4	96.0	106.1	124.8	2.4

See footnotes at end of table.

Table CE1-2c. Total Energy Consumption in U.S. Households by Year of Construction, 1997 (Continued)

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ¹	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.8	1.3	1.0	1.1	1.1	0.8	
Physical Units per Household³								
Physical Units of Total Consumption per Household, Fuels Used:								
Electricity (kWh)	10,219	12,512	12,449	11,976	9,459	9,033	7,735	2.7
Natural Gas (thousand cf)	83	80	72	76	74	81	96	3.6
Fuel Oil (gallons)	730	707	744	637	647	720	779	7.1
Kerosene (gallons)	126	146	105	110	115	106	146	26.5
LPG (gallons)	488	529	478	422	447	339	584	10.2
Wood (cords)	1.4	0.9	1.1	1.2	1.3	1.2	2.7	12.4
Million Households								
Number of Households, Where the End Use Is:								
Space Heating ⁴	99.7	9.6	17.1	19.2	14.1	12.4	27.3	4.2
Electric Air-Conditioning ⁵	72.6	8.3	14.6	14.7	10.0	8.9	16.1	4.7
Water Heating ⁶	100.8	9.7	17.2	19.4	14.3	12.5	27.7	4.2
Refrigerators	101.3	9.7	17.3	19.5	14.4	12.5	27.8	4.2
Appliances	101.5	9.7	17.3	19.6	14.4	12.5	27.9	4.2
Quadrillion Btu								
Total Btu Consumption, Where the End Use Is:								
Space Heating	5.18	0.38	0.53	0.75	0.69	0.70	2.14	5.6
Electric Air-Conditioning	0.42	0.06	0.11	0.10	0.05	0.04	0.05	7.1
Water Heating	1.92	0.18	0.29	0.33	0.28	0.25	0.58	4.7
Refrigerators	0.46	0.04	0.08	0.09	0.07	0.06	0.11	4.4
Other Appliances and Lighting	2.27	0.25	0.40	0.44	0.30	0.28	0.59	4.4
Million Btu per Household³								
Total Btu Consumption per Household, Where the End Use Is:								
Space Heating	52.0	39.3	30.8	39.1	48.7	56.2	78.4	3.9
Electric Air-Conditioning	5.7	7.4	7.4	6.5	5.4	4.8	3.3	5.3
Water Heating	19.0	19.0	17.1	17.2	19.2	20.2	21.0	2.7
Refrigerators	4.5	4.5	4.9	4.7	4.6	4.7	4.0	2.4
Other Appliances and Lighting	22.4	26.1	23.1	22.5	21.0	22.4	21.3	2.4

¹ New construction for 1997 includes only those housing units built and occupied between January and the April-August period when the household interviews were conducted.

² The RECS cannot be used to accurately estimate the number of households that do not use electricity.

³ The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.

⁴ Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

⁵ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

⁶ Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

(*) = Value rounds to zero in the units displayed.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE1-3c. Total Energy Consumption in U.S. Households by Household Income, 1997

	Total	1997 Household Income				Below Poverty Line	Eligible for Federal Assistance ¹	RSE Row Factors
		Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.6	1.6	1.0	0.8	1.0	1.4	1.0	
Million Households								
Total U.S. Households	101.5	13.3	29.1	31.1	27.9	14.6	34.1	2.7
Number of Households, Fuels Used (more than one may apply):								
Electricity ²	101.4	13.3	29.1	31.1	27.9	14.6	34.0	2.7
Natural Gas	61.9	8.0	17.0	19.0	17.9	9.1	20.4	4.3
Fuel Oil	10.0	1.3	2.5	3.2	3.0	1.4	3.4	10.4
Kerosene	3.5	0.4	1.2	1.2	0.6	0.6	1.4	14.5
LPG	8.1	1.0	2.4	2.7	1.9	1.2	2.8	12.7
Wood	15.0	0.7	3.0	4.7	6.7	1.1	3.0	9.4
Quadrillion Btu								
Total Btu Consumption, Fuels Used:								
Electricity								
Primary	10.72	1.01	2.69	3.27	3.74	1.24	2.98	3.6
Site	3.54	0.33	0.89	1.08	1.24	0.41	0.99	3.6
Natural Gas	5.28	0.53	1.30	1.65	1.80	0.63	1.53	5.5
Fuel Oil	1.01	0.11	0.22	0.31	0.37	0.11	0.30	11.5
Kerosene	0.06	0.01	0.02	0.02	0.01	0.01	0.03	23.5
LPG	0.36	0.04	0.11	0.13	0.08	0.04	0.12	15.3
Wood	0.43	0.03	0.10	0.14	0.15	0.04	0.12	14.3
Total (excludes primary electricity and wood)	10.25	1.02	2.54	3.19	3.49	1.22	2.96	3.2
Physical Units								
Physical Units of Total Consumption, Fuels Used:								
Electricity (billion kWh)	1,037	98	260	317	362	120	289	3.6
Natural Gas (billion cf)	5,143	516	1,270	1,604	1,752	618	1,490	5.5
Fuel Oil (million gallons)	7,273	761	1,598	2,262	2,653	811	2,138	11.5
Kerosene (million gallons)	437	67	161	154	54	98	193	23.5
LPG (million gallons)	3,937	412	1,177	1,428	920	484	1,286	15.3
Wood (million cords)	21.4	1.7	4.9	7.1	7.6	2.1	6.1	14.3
Million Btu per Household³								
Total Btu Consumption per Household, Fuels Used:								
Electricity								
Primary	105.6	76.2	92.3	105.2	134.1	85.1	87.7	2.5
Site	34.9	25.2	30.5	34.7	44.3	28.1	28.9	2.5
Natural Gas	85.3	66.4	76.7	86.9	100.3	69.4	75.0	3.1
Fuel Oil	101.2	81.3	87.9	99.4	123.1	80.8	86.5	4.9
Kerosene	17.0	22.3	17.5	17.5	11.5	21.2	18.8	19.7
LPG	44.6	36.3	44.1	48.6	43.9	38.2	42.2	9.9
Wood	28.5	49.9	33.4	30.7	22.7	38.9	40.4	12.4
Total (excludes primary electricity and wood)	101.0	76.4	87.3	102.6	125.2	83.0	86.7	2.1

See footnotes at end of table.

Table CE1-3c. Total Energy Consumption in U.S. Households by Household Income, 1997 (Continued)

	1997 Household Income					Below Poverty Line	Eligible for Federal Assistance ¹	RSE Row Factors
	Total	Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.6	1.6	1.0	0.8	1.0	1.4	1.0	
Physical Units per Household³								
Physical Units of Total Consumption per Household, Fuels Used:								
Electricity (kWh)	10,219	7,372	8,926	10,173	12,974	8,229	8,482	2.5
Natural Gas (thousand cf)	83	65	75	85	98	68	73	3.1
Fuel Oil (gallons)	730	587	634	717	888	583	624	4.9
Kerosene (gallons)	126	166	130	130	85	157	140	19.7
LPG (gallons)	488	398	483	533	480	418	462	9.9
Wood (cords)	1.4	2.5	1.7	1.5	1.1	1.9	2.0	12.4
Million Households								
Number of Households, Where the End Use Is:								
Space Heating ⁴	99.7	12.8	28.5	30.7	27.6	14.0	33.0	2.8
Electric Air-Conditioning ⁵	72.6	8.1	19.3	23.1	22.2	8.3	20.9	3.6
Water Heating ⁶	100.8	13.0	29.0	31.0	27.7	14.4	33.7	2.8
Refrigerators	101.3	13.2	29.1	31.1	27.9	14.6	34.0	2.7
Appliances	101.5	13.3	29.1	31.1	27.9	14.6	34.1	2.7
Quadrillion Btu								
Total Btu Consumption, Where the End Use Is:								
Space Heating	5.18	0.52	1.31	1.64	1.71	0.58	1.48	4.1
Electric Air-Conditioning	0.42	0.04	0.10	0.12	0.16	0.04	0.10	6.0
Water Heating	1.92	0.21	0.48	0.59	0.64	0.27	0.61	3.3
Refrigerators	0.46	0.05	0.12	0.14	0.15	0.06	0.13	3.2
Other Appliances and Lighting	2.27	0.21	0.53	0.71	0.83	0.27	0.63	3.2
Million Btu per Household³								
Total Btu Consumption per Household, Where the End Use Is:								
Space Heating	52.0	40.4	45.9	53.4	62.0	41.3	44.9	3.5
Electric Air-Conditioning	5.7	4.6	5.0	5.1	7.3	4.9	4.8	4.8
Water Heating	19.0	15.8	16.6	19.1	23.1	18.8	18.1	2.3
Refrigerators	4.5	3.8	4.1	4.4	5.5	3.8	3.9	1.9
Other Appliances and Lighting	22.4	15.4	18.4	22.7	29.6	18.5	18.6	2.0

¹ Below 150 percent of poverty line or 60 percent of median State income.

² The RECS cannot be used to accurately estimate the number of households that do not use electricity.

³ The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.

⁴ Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

⁵ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

⁶ Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE1-4c. Total Energy Consumption in U.S. Households
by Type of Housing Unit, 1997**

	Type of Housing Unit					RSE Row Factors
	Total	Single-Family	Multifamily		Mobile Home	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.5	0.5	2.0	1.3	1.6	
Million Households						
Total U.S. Households	101.5	73.7	5.6	15.8	6.3	4.0
Number of Households, Fuels Used (more than one may apply):						
Electricity ¹	101.4	73.7	5.6	15.8	6.3	4.0
Natural Gas	61.9	47.0	3.8	8.8	2.3	6.1
Fuel Oil	10.0	7.5	0.5	1.8	Q	13.6
Kerosene	3.5	2.7	Q	Q	0.6	16.1
LPG	8.1	6.2	Q	Q	1.7	15.4
Wood	15.0	14.0	Q	0.2	0.7	13.4
Quadrillion Btu						
Total Btu Consumption, Fuels Used:						
Electricity						
Primary	10.72	8.59	0.38	0.98	0.77	4.5
Site	3.54	2.84	0.12	0.32	0.25	4.5
Natural Gas	5.28	4.46	0.34	0.32	0.16	7.9
Fuel Oil	1.01	0.83	0.05	0.12	Q	16.0
Kerosene	0.06	0.04	Q	Q	0.02	28.0
LPG	0.36	0.29	Q	Q	0.06	17.6
Wood	0.43	0.39	Q	(*)	0.03	20.6
Total (excludes primary electricity and wood)	10.25	8.46	0.51	0.77	0.50	4.2
Physical Units						
Physical Units of Total Consumption, Fuels Used:						
Electricity (billion kWh)	1,037	831	37	95	74	4.5
Natural Gas (billion cf)	5,143	4,342	328	315	158	7.9
Fuel Oil (million gallons)	7,273	6,024	348	857	Q	16.0
Kerosene (million gallons)	437	273	Q	Q	139	28.0
LPG (million gallons)	3,937	3,196	Q	Q	683	17.6
Wood (million cords)	21.4	19.3	Q	0.1	1.5	20.6
Million Btu per Household²						
Total Btu Consumption per Household, Fuels Used:						
Electricity						
Primary	105.6	116.6	67.2	61.9	121.4	2.9
Site	34.9	38.5	22.2	20.4	40.1	2.9
Natural Gas	85.3	94.9	87.8	36.8	69.8	3.8
Fuel Oil	101.2	111.0	101.0	64.6	Q	5.8
Kerosene	17.0	13.5	Q	Q	32.3	22.0
LPG	44.6	47.0	Q	Q	36.6	9.5
Wood	28.5	27.7	Q	5.8	45.0	14.9
Total (excludes primary electricity and wood)	101.0	114.7	91.5	48.6	79.5	2.6

See footnotes at end of table.

Table CE1-4c. Total Energy Consumption in U.S. Households by Type of Housing Unit, 1997 (Continued)

	Type of Housing Unit					RSE Row Factors
	Total	Single-Family	Multifamily		Mobile Home	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.5	0.5	2.0	1.3	1.6	
Physical Units per Household²						
Physical Units of Total Consumption per Household, Fuels Used:						
Electricity (kWh)	10,219	11,278	6,505	5,990	11,739	2.9
Natural Gas (thousand cf)	83	92	85	36	68	3.8
Fuel Oil (gallons)	730	801	728	466	Q	5.8
Kerosene (gallons)	126	100	Q	Q	239	22.0
LPG (gallons)	488	515	Q	Q	401	9.5
Wood (cords)	1.4	1.4	Q	0.3	2.3	14.9
Million Households						
Number of Households, Where the End Use Is:						
Space Heating ³	99.7	72.7	5.6	15.3	6.1	4.0
Electric Air-Conditioning ⁴	72.6	53.8	3.4	10.9	4.5	4.8
Water Heating ⁵	100.8	73.4	5.6	15.5	6.3	4.0
Refrigerators	101.3	73.7	5.6	15.7	6.3	4.0
Appliances	101.5	73.7	5.6	15.8	6.3	4.0
Quadrillion Btu						
Total Btu Consumption, Where the End Use Is:						
Space Heating	5.18	4.39	0.30	0.26	0.23	5.7
Electric Air-Conditioning	0.42	0.33	0.01	0.04	0.03	7.5
Water Heating	1.92	1.48	0.10	0.24	0.09	4.4
Refrigerators	0.46	0.37	0.02	0.05	0.02	3.9
Other Appliances and Lighting	2.27	1.89	0.08	0.18	0.13	3.8
Million Btu per Household²						
Total Btu Consumption per Household, Where the End Use Is:						
Space Heating	52.0	60.4	54.2	16.9	37.0	4.6
Electric Air-Conditioning	5.7	6.1	3.3	3.7	7.5	5.7
Water Heating	19.0	20.2	18.0	15.8	14.2	3.0
Refrigerators	4.5	5.0	3.4	3.1	3.9	2.0
Other Appliances and Lighting	22.4	25.6	14.2	11.2	20.5	2.0

¹ The RECS cannot be used to accurately estimate the number of households that do not use electricity.

² The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.

³ Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

⁴ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

⁵ Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

(*) = Value rounds to zero in the units displayed.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE1-5u. Total Energy Consumption and Expenditures in U.S. Households by Household Demographics, 1997

Household Demographics	Total End-Use Energy					RSE Row Factors
	Households (millions)	Total		Per Household		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	
RSE Column Factor:	1.1	1.4	1.3	0.8	0.6	
Total	101.5	10.25	135.79	101.0	1,338	1.2
Household Size						
1 Person	25.6	1.91	24.59	74.7	962	2.3
2 Persons	33.0	3.34	44.42	101.2	1,347	2.0
3 Persons	17.4	1.91	25.61	109.5	1,471	2.5
4 Persons	15.2	1.79	23.94	117.7	1,571	2.8
5 Persons	6.4	0.80	10.53	123.9	1,640	4.8
6 or More Persons	3.9	0.50	6.71	129.6	1,734	6.5
1997 Household Income Category						
Less than \$5,000	3.8	0.30	3.85	81.3	1,028	6.5
\$5,000 to \$9,999	9.6	0.71	9.41	74.4	985	5.1
\$10,000 to \$14,999	10.3	0.86	10.97	83.2	1,063	4.4
\$15,000 to \$19,999	10.4	0.91	12.29	87.6	1,182	3.9
\$20,000 to \$24,999	8.4	0.77	10.39	91.7	1,233	3.7
\$25,000 to \$34,999	15.6	1.53	19.94	98.0	1,276	3.0
\$35,000 to \$49,999	15.5	1.66	21.61	107.1	1,394	2.5
\$50,000 to \$74,999	16.4	1.96	26.25	119.1	1,599	3.2
\$75,000 or More	11.5	1.54	21.08	133.9	1,835	4.1
Below Poverty Line						
100 Percent	14.6	1.22	15.95	83.0	1,088	3.5
125 Percent	19.7	1.63	21.56	82.9	1,096	3.4
150 Percent	26.7	2.25	29.85	84.2	1,117	2.8
Eligible for Federal Assistance¹						
	34.1	2.96	38.86	86.7	1,140	2.5
Age of Householder						
Under 25 Years	5.7	0.39	5.52	69.7	974	5.3
25 to 34 Years	18.5	1.63	21.93	87.7	1,184	2.9
35 to 44 Years	23.2	2.49	33.40	107.4	1,441	2.3
45 to 59 Years	25.6	2.90	38.89	113.4	1,519	2.1
60 Years and Over	28.5	2.83	36.05	99.4	1,265	2.6
Race of Householder						
White	78.5	8.16	108.12	103.9	1,378	1.4
Black	12.7	1.34	17.16	105.3	1,351	4.6
Other ²	10.3	0.75	10.51	72.8	1,020	4.9
Householder of Hispanic Descent						
Yes	9.4	0.72	10.27	75.9	1,089	4.7
No	92.1	9.53	125.52	103.5	1,364	1.3

¹ Below 150 percent of poverty line or 60 percent of median State income.

² Includes 5.5 million householders who described themselves as Hispanic rather than White, Black, or other.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE1-6u. Total Energy Consumption and Expenditures in U.S. Households by Usage Indicators, 1997

Usage Indicators	Total End-Use Energy					RSE Row Factors
	Households (million)	Total		Per Household		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	
	RSE Column Factor:	1.2	1.4	1.3	0.8	
Total	101.5	10.25	135.79	101.0	1,338	1.2
Household Size						
1 Person	25.6	1.91	24.59	74.7	962	2.3
2 Persons	33.0	3.34	44.42	101.2	1,347	2.0
3 Persons	17.4	1.91	25.61	109.5	1,471	2.5
4 Persons	15.2	1.79	23.94	117.7	1,571	2.8
5 Persons	6.4	0.80	10.53	123.9	1,640	4.8
6 or More Persons	3.9	0.50	6.71	129.6	1,734	6.5
Weekday Home Activities						
Home Used for Business						
Yes	7.4	0.84	11.24	114.4	1,528	5.2
No	94.1	9.40	124.55	99.9	1,323	1.2
Energy-Intensive Activity						
Yes	2.4	0.29	4.00	121.4	1,664	7.6
No	99.1	9.95	131.80	100.5	1,330	1.2
Someone Home All Day						
Yes	51.3	5.48	72.18	106.7	1,406	1.8
No	50.1	4.77	63.61	95.1	1,268	1.8
Estimated Heated Floorspace Category (square feet)¹						
Fewer than 600	7.9	0.48	6.45	61.1	818	4.9
600 to 999	21.5	1.66	22.15	77.4	1,031	3.2
1,000 to 1,599	30.4	2.96	39.36	97.4	1,297	2.5
1,600 to 1,999	15.3	1.78	23.59	116.6	1,543	2.8
2,000 to 2,399	7.9	0.98	13.16	124.3	1,669	3.8
2,400 to 2,999	5.3	0.73	9.80	137.7	1,836	4.9
3,000 or More	4.1	0.72	9.44	175.2	2,288	6.7
No Estimate Provided	9.1	0.93	11.85	101.5	1,299	4.9
Winter Temperature Settings						
Lower When No One Home						
Yes	45.5	4.54	60.17	99.9	1,323	1.9
No	56.0	5.70	75.62	101.8	1,350	1.6
Lower During Sleeping Hours						
Yes	47.4	4.82	63.73	101.6	1,343	1.9
No	54.0	5.43	72.06	100.4	1,334	1.6
Use a Secondary Heating Fuel						
Yes	34.3	3.97	52.68	116.0	1,538	2.5
No	66.5	6.24	82.40	94.0	1,240	1.7
Adequacy of Insulation						
Well Insulated	38.0	3.75	51.60	98.6	1,357	2.2
Adequately Insulated	44.4	4.56	59.87	102.5	1,347	1.9
Poorly Insulated	18.5	1.90	23.78	103.0	1,287	3.1
Central Air-Conditioning Use						
All Summer	24.6	2.41	36.59	97.9	1,485	3.0
Quite a Bit	10.4	1.07	14.69	103.1	1,410	4.1
Only a Few Times	12.4	1.28	16.77	103.5	1,355	4.4
No Central System	53.7	5.46	67.41	101.6	1,255	2.0

See footnotes at end of table.

Table CE1-6u. Total Energy Consumption and Expenditures in U.S. Households by Usage Indicators, 1997 (Continued)

Usage Indicators	Total End-Use Energy					RSE Row Factors
	Households (million)	Total		Per Household		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	
	RSE Column Factor:	1.2	1.4	1.3	0.8	
Room Air-Conditioning Use						
All Summer	5.7	0.54	7.58	96.3	1,341	6.2
Quite a Bit	6.6	0.75	9.33	113.3	1,412	4.6
Only a Few Times	13.5	1.45	18.22	107.5	1,348	3.8
No Room Units	75.0	7.42	99.73	99.0	1,330	1.5
Use a Dishwasher						
Yes	50.9	5.58	76.73	109.6	1,507	1.8
No	50.6	4.66	59.07	92.2	1,168	2.0
Use a Clothes Washer						
Yes	78.5	8.82	116.43	112.3	1,482	1.2
No	22.9	1.43	19.36	62.2	844	3.4
Use a Clothes Dryer						
Yes	72.2	8.21	108.54	113.7	1,503	1.4
No	29.3	2.03	27.25	69.5	931	2.9
Use Two or More Refrigerators						
Yes	15.4	2.08	27.32	135.0	1,776	2.8
No	86.1	8.17	108.47	94.9	1,260	1.3
Outdoor Lights on all Night						
Yes	26.3	2.85	38.33	108.2	1,457	2.5
No	75.2	7.40	97.46	98.4	1,297	1.5
Utilities Paid by Household						
All Major Fuels²						
Yes	89.7	9.36	125.30	104.3	1,397	1.3
No	11.8	0.89	10.49	75.3	892	4.4
Electricity						
Yes	96.2	9.90	131.54	103.0	1,368	1.1
No	5.3	0.34	4.25	65.0	806	7.4
Natural Gas						
Yes	53.3	6.59	75.93	123.5	1,424	2.1
No	8.6	0.68	7.63	78.8	888	5.0
Fuel Oil						
Yes	7.6	1.11	14.18	145.8	1,859	5.9
No	2.3	0.21	2.43	91.9	1,041	8.0
LPG						
Yes	7.9	0.82	12.57	103.8	1,592	5.9
No	0.2	0.02	0.20	88.5	1,146	20.7
Kerosene						
Yes	3.5	0.35	5.02	100.5	1,443	6.7
No	Q	Q	Q	Q	Q	NF

¹ Estimates provided by the household interview respondents, who were asked which category best described the total heated floorspace in the home.

² The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE1-7c. Total Energy Consumption in U.S. Households
by Four Most Populated States, 1997**

	Four Most Populated States					RSE Row Factors
	Total U.S.	New York	California	Texas	Florida	
	0.4	1.3	1.0	1.5	1.5	
RSE Column Factor:						
Million Households						
Total U.S. Households	101.5	6.8	11.5	7.0	5.9	NF
Number of Households, Fuels Used (more than one may apply):						
Electricity ¹	101.4	6.8	11.5	7.0	5.9	NF
Natural Gas	61.9	5.1	9.7	4.7	1.2	5.9
Fuel Oil	10.0	2.9	Q	Q	Q	17.8
Kerosene	3.5	Q	Q	Q	Q	25.1
LPG	8.1	0.6	0.4	0.3	0.4	21.4
Wood	15.0	0.8	2.1	0.9	0.7	15.8
Quadrillion Btu						
Total Btu Consumption, Fuels Used:						
Electricity						
Primary	10.72	0.41	0.72	1.01	0.87	4.7
Site	3.54	0.14	0.24	0.33	0.29	4.7
Natural Gas	5.28	0.39	0.47	0.32	0.03	8.3
Fuel Oil	1.01	0.30	Q	Q	Q	22.7
Kerosene	0.06	Q	Q	Q	Q	47.3
LPG	0.36	0.01	0.02	0.02	(*)	26.8
Wood	0.43	0.08	0.04	0.01	Q	13.4
Total (excludes primary electricity and wood)	10.25	0.84	0.73	0.67	0.33	3.8
Physical Units						
Physical Units of Total Consumption, Fuels Used:						
Electricity (billion kWh)	1,037	40	70	98	84	4.7
Natural Gas (billion cf)	5,143	379	459	311	30	8.3
Fuel Oil (million gallons)	7,273	2,163	Q	Q	Q	22.7
Kerosene (million gallons)	437	Q	Q	Q	Q	47.3
LPG (million gallons)	3,937	102	183	178	44	26.8
Wood (million cords)	21.4	4.2	1.9	0.5	Q	13.4
Million Btu per Household²						
Total Btu Consumption per Household, Fuels Used:						
Electricity						
Primary	105.6	60.8	62.9	145.4	146.9	4.7
Site	34.9	20.1	20.8	48.0	48.5	4.7
Natural Gas	85.3	75.9	48.6	67.8	27.2	6.2
Fuel Oil	101.2	103.0	Q	Q	Q	8.7
Kerosene	17.0	45.1	Q	Q	Q	26.3
LPG	44.6	16.8	39.1	49.1	10.5	18.7
Wood	28.5	100.0	17.9	12.7	9.6	14.6
Total (excludes primary electricity and wood)	101.0	123.4	63.9	96.1	54.9	3.8

See footnotes at end of table.

Table CE1-7c. Total Energy Consumption in U.S. Households by Four Most Populated States, 1997 (Continued)

	Four Most Populated States				RSE Row Factors	
	Total U.S.	New York	California	Texas		Florida
RSE Column Factor:	0.4	1.3	1.0	1.5	1.5	
Physical Units per Household²						
Physical Units of Total Consumption per Household, Fuels Used:						
Electricity (kWh)	10,219	5,879	6,087	14,062	14,210	4.7
Natural Gas (thousand cf)	83	74	47	66	26	6.2
Fuel Oil (gallons)	730	743	Q	Q	Q	8.7
Kerosene (gallons)	126	334	Q	Q	Q	26.3
LPG (gallons)	488	184	429	538	115	18.7
Wood (cords)	1.4	5.0	0.9	0.6	0.5	14.6
Million Households						
Number of Households, Where the End Use Is:						
Space Heating ³	99.7	6.7	11.2	6.9	5.7	1.5
Electric Air-Conditioning ⁴	72.6	4.2	4.6	6.3	5.6	3.3
Water Heating ⁵	100.8	6.8	11.4	6.9	5.8	NF
Refrigerators	101.3	6.8	11.4	7.0	5.9	NF
Appliances	101.5	6.8	11.5	7.0	5.9	NF
Quadrillion Btu						
Total Btu Consumption, Where the End Use Is:						
Space Heating	5.18	0.52	0.22	0.21	0.03	8.7
Electric Air-Conditioning	0.42	0.01	0.02	0.07	0.07	10.0
Water Heating	1.92	0.17	0.24	0.14	0.06	4.2
Refrigerators	0.46	0.02	0.04	0.04	0.03	3.5
Other Appliances and Lighting	2.27	0.12	0.22	0.20	0.14	4.1
Million Btu per Household²						
Total Btu Consumption per Household, Where the End Use Is:						
Space Heating	52.0	76.9	19.5	30.5	4.6	8.8
Electric Air-Conditioning	5.7	1.8	3.6	11.6	13.1	7.8
Water Heating	19.0	25.1	20.7	20.5	9.8	4.2
Refrigerators	4.5	3.3	3.9	6.4	5.8	3.5
Other Appliances and Lighting	22.4	18.3	18.9	28.4	22.9	4.1

1 The RECS cannot be used to accurately estimate the number of households that do not use electricity.
2 The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.
3 Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.
4 The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.
5 Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.
(*) = Value rounds to zero in the units displayed.
NF = No applicable RSE row factor.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE1-8c. Total Energy Consumption in U.S. Households by Urban/Rural Location, 1997

	Urban/Rural Location ¹					RSE Row Factors
	Total	City	Town	Suburbs	Rural	
	0.5	0.9	1.4	1.3	1.2	
Million Households						
Total U.S. Households	101.5	48.2	18.2	18.6	16.5	4.1
Number of Households, Fuels Used (more than one may apply):						
Electricity ²	101.4	48.2	18.2	18.6	16.4	4.1
Natural Gas	61.9	35.4	10.5	12.2	3.8	5.7
Fuel Oil	10.0	3.2	2.4	1.6	2.8	11.7
Kerosene	3.5	1.0	0.6	0.5	1.4	16.2
LPG	8.1	0.9	1.4	0.6	5.1	14.8
Wood	15.0	3.5	2.8	3.7	5.0	8.9
Quadrillion Btu						
Total Btu Consumption, Fuels Used:						
Electricity						
Primary	10.72	4.30	1.88	2.25	2.28	4.2
Site	3.54	1.42	0.62	0.74	0.75	4.2
Natural Gas	5.28	2.88	0.94	1.12	0.34	7.0
Fuel Oil	1.01	0.28	0.25	0.17	0.30	13.2
Kerosene	0.06	0.01	0.02	(*)	0.03	25.1
LPG	0.36	0.02	0.07	0.01	0.25	18.2
Wood	0.43	0.06	0.07	0.05	0.25	13.0
Total (excludes primary electricity and wood)	10.25	4.62	1.90	2.05	1.68	4.0
Physical Units						
Physical Units of Total Consumption, Fuels Used:						
Electricity (billion kWh)	1,037	416	182	218	221	4.2
Natural Gas (billion cf)	5,143	2,804	919	1,088	332	7.0
Fuel Oil (million gallons)	7,273	2,055	1,782	1,252	2,184	13.3
Kerosene (million gallons)	437	79	115	24	220	25.1
LPG (million gallons)	3,937	256	777	156	2,748	18.2
Wood (million cords)	21.4	2.9	3.4	2.5	12.5	13.0
Million Btu per Household³						
Total Btu Consumption per Household, Fuels Used:						
Electricity						
Primary	105.6	89.2	103.3	121.3	138.7	2.2
Site	34.9	29.5	34.1	40.0	45.8	2.2
Natural Gas	85.3	81.4	89.8	91.6	89.1	3.2
Fuel Oil	101.2	89.3	103.7	109.8	107.9	5.1
Kerosene	17.0	11.1	26.3	5.9	21.4	18.9
LPG	44.6	25.9	49.2	24.3	48.9	10.8
Wood	28.5	17.0	24.4	13.3	50.3	10.1
Total (excludes primary electricity and wood)	101.0	95.8	104.2	110.4	101.9	2.3

See footnotes at end of table.

Table CE1-8c. Total Energy Consumption in U.S. Households by Urban/Rural Location, 1997 (Continued)

	Urban/Rural Location ¹					RSE Row Factors
	Total	City	Town	Suburbs	Rural	
RSE Column Factor:	0.5	0.9	1.4	1.3	1.2	
Physical Units per Household³						
Physical Units of Total Consumption per Household, Fuels Used:						
Electricity (kWh)	10,219	8,632	9,988	11,736	13,417	2.2
Natural Gas (thousand cf)	83	79	87	89	87	3.2
Fuel Oil (gallons)	730	644	748	793	778	5.1
Kerosene (gallons)	126	82	195	43	158	18.9
LPG (gallons)	488	284	538	266	535	10.8
Wood (cords)	1.4	0.9	1.2	0.7	2.5	10.1
Million Households						
Number of Households, Where the End Use Is:						
Space Heating ⁴	99.7	47.4	18.0	18.4	15.9	4.1
Electric Air-Conditioning ⁵	72.6	33.1	13.1	14.8	11.5	4.4
Water Heating ⁶	100.8	47.8	18.2	18.6	16.2	4.1
Refrigerators	101.3	48.1	18.2	18.6	16.4	4.1
Appliances	101.5	48.2	18.2	18.6	16.5	4.1
Quadrillion Btu						
Total Btu Consumption, Where the End Use Is:						
Space Heating	5.18	2.31	1.04	0.99	0.84	5.0
Electric Air-Conditioning	0.42	0.18	0.06	0.10	0.07	6.3
Water Heating	1.92	0.95	0.33	0.37	0.27	4.1
Refrigerators	0.46	0.21	0.08	0.09	0.08	3.9
Other Appliances and Lighting	2.27	0.97	0.39	0.49	0.43	3.8
Million Btu per Household³						
Total Btu Consumption per Household, Where the End Use Is:						
Space Heating	52.0	48.8	57.7	53.9	52.8	3.7
Electric Air-Conditioning	5.7	5.5	4.6	7.0	5.9	4.5
Water Heating	19.0	19.8	18.4	20.1	16.3	2.3
Refrigerators	4.5	4.3	4.3	5.1	4.9	1.9
Other Appliances and Lighting	22.4	20.1	21.2	26.3	26.0	1.9

¹ Based on the household respondent's description rather than the Federal Government definition.
² The RECS cannot be used to accurately estimate the number of households that do not use electricity.
³ The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.
⁴ Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.
⁵ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.
⁶ Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.
 (*) = Value rounds to zero in the units displayed.
 Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
 Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE1-9c. Total Energy Consumption in U.S. Households
by Northeast Census Region, 1997**

	Northeast Census Region				RSE Row Factors
	Total U.S.	Census Division			
		Total	Middle Atlantic	New England	
			0.5	1.0	
RSE Column Factor:					
Million Households					
Total U.S. Households	101.5	19.7	14.4	5.3	NF
Number of Households, Fuels Used (more than one may apply):					
Electricity ¹	101.4	19.7	14.4	5.3	NF
Natural Gas	61.9	11.8	9.9	1.9	7.4
Fuel Oil	10.0	7.5	4.6	2.9	10.1
Kerosene	3.5	1.0	0.6	0.4	20.4
LPG	8.1	1.6	1.0	0.6	18.1
Wood	15.0	2.5	1.6	0.9	11.3
Quadrillion Btu					
Total Btu Consumption, Fuels Used:					
Electricity					
Primary	10.72	1.48	1.09	0.39	3.3
Site	3.54	0.49	0.36	0.13	3.3
Natural Gas	5.28	1.03	0.86	0.17	9.3
Fuel Oil	1.01	0.81	0.48	0.33	12.3
Kerosene	0.06	0.03	0.01	0.01	31.2
LPG	0.36	0.03	0.02	0.01	23.6
Wood	0.43	0.14	0.11	0.03	16.6
Total (excludes primary electricity and wood)	10.25	2.38	1.73	0.65	2.2
Physical Units					
Physical Units of Total Consumption, Fuels Used:					
Electricity (billion kWh)	1,037	143	105	37	3.3
Natural Gas (billion cf)	5,143	1,000	836	165	9.3
Fuel Oil (million gallons)	7,273	5,816	3,433	2,383	12.3
Kerosene (million gallons)	437	214	104	110	31.2
LPG (million gallons)	3,937	317	207	110	23.6
Wood (million cords)	21.4	7.0	5.3	1.6	16.6
Million Btu per Household²					
Total Btu Consumption per Household, Fuels Used:					
Electricity					
Primary	105.6	74.9	75.6	73.0	3.3
Site	34.9	24.7	25.0	24.1	3.3
Natural Gas	85.3	86.9	86.9	87.0	3.5
Fuel Oil	101.2	108.0	103.1	115.9	4.2
Kerosene	17.0	30.2	23.6	41.3	18.1
LPG	44.6	18.7	19.9	16.7	19.5
Wood	28.5	56.0	65.7	37.9	12.6
Total (excludes primary electricity and wood)	101.0	120.6	119.7	122.9	2.2

See footnotes at end of table.

Table CE1-9c. Total Energy Consumption in U.S. Households by Northeast Census Region, 1997 (Continued)

	Northeast Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Middle Atlantic	New England	
	RSE Column Factor:	0.5	1.0	1.2	
Physical Units per Household²					
Physical Units of Total Consumption per Household, Fuels Used:					
Electricity (kWh)	10,219	7,246	7,313	7,062	3.3
Natural Gas (thousand cf)	83	85	85	85	3.5
Fuel Oil (gallons)	730	779	744	836	4.2
Kerosene (gallons)	126	224	174	306	18.1
LPG (gallons)	488	204	218	183	19.5
Wood (cords)	1.4	2.8	3.3	1.9	12.6
Million Households					
Number of Households, Where the End Use Is:					
Space Heating ³	99.7	19.5	14.3	5.2	NF
Electric Air-Conditioning ⁴	72.6	12.2	9.7	2.5	4.2
Water Heating ⁵	100.8	19.6	14.3	5.3	0.7
Refrigerators	101.3	19.7	14.4	5.3	NF
Appliances	101.5	19.7	14.4	5.3	NF
Quadrillion Btu					
Total Btu Consumption, Where the End Use Is:					
Space Heating	5.18	1.48	1.06	0.43	3.2
Electric Air-Conditioning	0.42	0.02	0.02	(*)	7.4
Water Heating	1.92	0.42	0.31	0.11	2.6
Refrigerators	0.46	0.07	0.05	0.02	2.4
Other Appliances and Lighting	2.27	0.38	0.29	0.09	1.9
Million Btu per Household²					
Total Btu Consumption per Household, Where the End Use Is:					
Space Heating	52.0	76.0	73.8	82.0	3.3
Electric Air-Conditioning	5.7	2.0	2.2	1.5	5.0
Water Heating	19.0	21.4	21.6	20.9	2.7
Refrigerators	4.5	3.6	3.7	3.5	2.4
Other Appliances and Lighting	22.4	19.2	19.9	17.4	1.9

¹ The RECS cannot be used to accurately estimate the number of households that do not use electricity.
² The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.
³ Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.
⁴ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.
⁵ Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.
 (*) = Value rounds to zero in the units displayed.
 NF = No applicable RSE row factor.
 Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
 Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE1-10c. Total Energy Consumption in U.S. Households
by Midwest Census Region, 1997**

	Midwest Census Region				RSE Row Factors
	Total U.S.	Census Division			
		Total	East North Central	West North Central	
			0.5	1.1	
RSE Column Factor:	0.5	1.0	1.1	1.8	
Million Households					
Total U.S. Households	101.5	24.1	16.9	7.2	NF
Number of Households, Fuels Used (more than one may apply):					
Electricity ¹	101.4	24.1	16.9	7.2	NF
Natural Gas	61.9	18.5	13.7	4.9	5.0
Fuel Oil	10.0	1.1	0.6	0.4	17.5
Kerosene	3.5	0.4	0.4	Q	17.3
LPG	8.1	2.3	1.2	1.2	20.8
Wood	15.0	2.6	1.7	0.9	12.2
Quadrillion Btu					
Total Btu Consumption, Fuels Used:					
Electricity					
Primary	10.72	2.26	1.51	0.75	3.7
Site	3.54	0.75	0.50	0.25	3.7
Natural Gas	5.28	2.20	1.67	0.52	6.1
Fuel Oil	1.01	0.10	0.06	0.04	19.9
Kerosene	0.06	Q	Q	Q	34.0
LPG	0.36	0.17	0.10	0.07	18.6
Wood	0.43	0.08	0.04	Q	24.4
Total (excludes primary electricity and wood)	10.25	3.22	2.34	0.89	2.6
Physical Units					
Physical Units of Total Consumption, Fuels Used:					
Electricity (billion kWh)	1,037	219	146	73	3.7
Natural Gas (billion cf)	5,143	2,141	1,630	511	6.1
Fuel Oil (million gallons)	7,273	752	462	291	19.9
Kerosene (million gallons)	437	Q	Q	Q	34.0
LPG (million gallons)	3,937	1,869	1,058	811	18.6
Wood (million cords)	21.4	3.8	2.2	Q	24.4
Million Btu per Household²					
Total Btu Consumption per Household, Fuels Used:					
Electricity					
Primary	105.6	94.0	89.2	105.3	3.7
Site	34.9	31.0	29.4	34.7	3.7
Natural Gas	85.3	118.6	122.7	107.2	2.3
Fuel Oil	101.2	98.8	98.7	99.2	4.8
Kerosene	17.0	Q	Q	Q	26.2
LPG	44.6	73.7	83.5	64.0	9.3
Wood	28.5	29.3	26.2	35.1	18.9
Total (excludes primary electricity and wood)	101.0	134.0	138.2	124.1	2.6

See footnotes at end of table.

Table CE1-10c. Total Energy Consumption in U.S. Households by Midwest Census Region, 1997 (Continued)

	Midwest Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			East North Central	West North Central	
RSE Column Factor:	0.5	1.0	1.1	1.8	
Physical Units per Household²					
Physical Units of Total Consumption per Household, Fuels Used:					
Electricity (kWh)	10,219	9,091	8,631	10,181	3.7
Natural Gas (thousand cf)	83	115	119	104	2.3
Fuel Oil (gallons)	730	715	713	718	4.8
Kerosene (gallons)	126	Q	Q	Q	26.2
LPG (gallons)	488	807	914	701	9.3
Wood (cords)	1.4	1.5	1.3	1.8	18.9
Million Households					
Number of Households, Where the End Use Is:					
Space Heating ³	99.7	23.8	16.8	7.0	0.6
Electric Air-Conditioning ⁴	72.6	18.6	12.4	6.3	2.2
Water Heating ⁵	100.8	23.9	16.8	7.1	NF
Refrigerators	101.3	24.0	16.9	7.1	NF
Appliances	101.5	24.1	16.9	7.2	NF
Quadrillion Btu					
Total Btu Consumption, Where the End Use Is:					
Space Heating	5.18	1.96	1.44	0.52	4.0
Electric Air-Conditioning	0.42	0.06	0.04	0.03	5.9
Water Heating	1.92	0.53	0.38	0.14	2.6
Refrigerators	0.46	0.10	0.07	0.03	2.1
Other Appliances and Lighting	2.27	0.58	0.41	0.17	2.2
Million Btu per Household²					
Total Btu Consumption per Household, Where the End Use Is:					
Space Heating	52.0	82.3	85.8	73.7	4.0
Electric Air-Conditioning	5.7	3.3	3.0	4.1	5.0
Water Heating	19.0	22.0	22.7	20.3	2.5
Refrigerators	4.5	4.3	4.2	4.5	2.1
Other Appliances and Lighting	22.4	24.0	24.2	23.4	2.2

¹ The RECS cannot be used to accurately estimate the number of households that do not use electricity.
² The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.
³ Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.
⁴ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.
⁵ Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.
 NF = No applicable RSE row factor.
 Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
 Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
 Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE1-11c. Total Energy Consumption in U.S. Households
by South Census Region, 1997**

	South Census Region					RSE Row Factors
	Total U.S.	Census Division			West South Central	
		Total	South Atlantic	East South Central		
RSE Column Factor:	0.5	0.8	1.1	1.5	1.5	
Million Households						
Total U.S. Households	101.5	35.9	18.7	6.3	10.8	NF
Number of Households, Fuels Used (more than one may apply):						
Electricity ¹	101.4	35.9	18.7	6.3	10.8	NF
Natural Gas	61.9	16.4	6.4	2.7	7.3	7.1
Fuel Oil	10.0	1.2	1.1	Q	Q	29.1
Kerosene	3.5	1.9	1.3	0.4	Q	15.8
LPG	8.1	3.2	1.6	1.1	0.5	18.3
Wood	15.0	5.7	3.3	1.1	1.3	9.1
Quadrillion Btu						
Total Btu Consumption, Fuels Used:						
Electricity						
Primary	10.72	5.05	2.53	0.98	1.55	3.1
Site	3.54	1.67	0.83	0.32	0.51	3.1
Natural Gas	5.28	1.13	0.43	0.19	0.51	10.3
Fuel Oil	1.01	0.08	0.07	Q	Q	29.4
Kerosene	0.06	0.02	0.02	(*)	Q	23.6
LPG	0.36	0.12	0.05	0.04	0.02	19.9
Wood	0.43	0.11	0.07	0.02	0.02	15.7
Total (excludes primary electricity and wood)	10.25	3.01	1.40	0.56	1.05	3.3
Physical Units						
Physical Units of Total Consumption, Fuels Used:						
Electricity (billion kWh)	1,037	489	244	94	150	3.1
Natural Gas (billion cf)	5,143	1,097	416	180	500	10.3
Fuel Oil (million gallons)	7,273	555	537	Q	Q	29.4
Kerosene (million gallons)	437	161	126	33	Q	23.6
LPG (million gallons)	3,937	1,276	572	457	247	19.9
Wood (million cords)	21.4	5.7	3.5	1.2	1.0	15.7
Million Btu per Household²						
Total Btu Consumption per Household, Fuels Used:						
Electricity						
Primary	105.6	140.8	135.2	153.9	142.9	3.1
Site	34.9	46.5	44.6	50.8	47.2	3.1
Natural Gas	85.3	68.5	66.3	69.3	70.1	5.8
Fuel Oil	101.2	66.2	65.3	Q	Q	6.8
Kerosene	17.0	11.6	13.1	Q	Q	20.2
LPG	44.6	36.0	32.0	38.7	43.3	8.0
Wood	28.5	20.1	21.3	22.6	15.2	12.8
Total (excludes primary electricity and wood)	101.0	83.9	75.1	87.7	96.7	3.3

See footnotes at end of table.

Table CE1-11c. Total Energy Consumption in U.S. Households by South Census Region, 1997 (Continued)

	South Census Region					RSE Row Factors
	Total U.S.	Census Division			West South Central	
		Total	South Atlantic	East South Central		
RSE Column Factor:	0.5	0.8	1.1	1.5	1.5	
Physical Units per Household²						
Physical Units of Total Consumption per Household, Fuels Used:						
Electricity (kWh)	10,219	13,624	13,077	14,890	13,826	3.1
Natural Gas (thousand cf)	83	67	65	67	68	5.8
Fuel Oil (gallons)	730	478	471	Q	Q	6.8
Kerosene (gallons)	126	86	97	Q	Q	20.2
LPG (gallons)	488	395	350	424	474	8.0
Wood (cords)	1.4	1.0	1.1	1.1	0.8	12.8
Million Households						
Number of Households, Where the End Use Is:						
Space Heating ³	99.7	35.4	18.3	6.3	10.8	NF
Electric Air-Conditioning ⁴	72.6	33.2	17.2	6.0	10.0	1.6
Water Heating ⁵	100.8	35.7	18.5	6.3	10.8	NF
Refrigerators	101.3	35.8	18.7	6.3	10.8	NF
Appliances	101.5	35.9	18.7	6.3	10.8	NF
Quadrillion Btu						
Total Btu Consumption, Where the End Use Is:						
Space Heating	5.18	1.09	0.51	0.22	0.36	7.1
Electric Air-Conditioning	0.42	0.29	0.14	0.04	0.11	4.9
Water Heating	1.92	0.56	0.24	0.10	0.22	3.5
Refrigerators	0.46	0.19	0.09	0.04	0.07	2.2
Other Appliances and Lighting	2.27	0.87	0.42	0.16	0.30	2.2
Million Btu per Household²						
Total Btu Consumption per Household, Where the End Use Is:						
Space Heating	52.0	30.8	28.1	35.0	33.0	7.2
Electric Air-Conditioning	5.7	8.8	8.1	7.0	11.0	4.5
Water Heating	19.0	15.7	13.2	15.6	20.0	3.5
Refrigerators	4.5	5.4	4.9	5.5	6.1	2.2
Other Appliances and Lighting	22.4	24.4	22.2	25.2	27.6	2.2

¹ The RECS cannot be used to accurately estimate the number of households that do not use electricity.

² The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.

³ Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

⁴ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

⁵ Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

(*) = Value rounds to zero in the units displayed.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE1-12c. Total Energy Consumption in U.S. Households
by West Census Region, 1997**

	West Census Region				RSE Row Factors
	Total U.S.	Census Division			
		Total	Mountain	Pacific	
			0.5	1.0	
RSE Column Factor:	0.5	1.0	1.7	1.2	
Million Households					
Total U.S. Households	101.5	21.8	6.2	15.6	NF
Number of Households, Fuels Used (more than one may apply):					
Electricity ¹	101.4	21.8	6.2	15.6	NF
Natural Gas	61.9	15.1	4.4	10.7	2.5
Fuel Oil	10.0	0.3	Q	0.2	25.5
Kerosene	3.5	0.2	Q	Q	21.5
LPG	8.1	1.0	0.4	0.6	18.2
Wood	15.0	4.2	1.1	3.1	9.2
Quadrillion Btu					
Total Btu Consumption, Fuels Used:					
Electricity					
Primary	10.72	1.92	0.60	1.32	2.6
Site	3.54	0.64	0.20	0.44	2.6
Natural Gas	5.28	0.93	0.35	0.58	5.3
Fuel Oil	1.01	0.02	Q	0.01	29.7
Kerosene	0.06	(*)	Q	Q	32.0
LPG	0.36	0.04	0.02	0.02	22.5
Wood	0.43	0.10	0.03	0.06	14.4
Total (excludes primary electricity and wood)	10.25	1.63	0.58	1.05	3.0
Physical Units					
Physical Units of Total Consumption, Fuels Used:					
Electricity (billion kWh)	1,037	186	58	128	2.6
Natural Gas (billion cf)	5,143	904	343	561	5.3
Fuel Oil (million gallons)	7,273	151	Q	108	29.7
Kerosene (million gallons)	437	33	Q	Q	32.0
LPG (million gallons)	3,937	475	255	220	22.5
Wood (million cords)	21.4	4.9	1.7	3.1	14.4
Million Btu per Household²					
Total Btu Consumption per Household, Fuels Used:					
Electricity					
Primary	105.6	88.4	97.4	84.8	2.6
Site	34.9	29.2	32.2	28.0	2.6
Natural Gas	85.3	61.5	79.4	54.1	3.8
Fuel Oil	101.2	75.0	Q	77.5	16.0
Kerosene	17.0	20.4	Q	Q	28.8
LPG	44.6	44.8	62.7	33.7	12.2
Wood	28.5	23.2	30.7	20.5	11.1
Total (excludes primary electricity and wood)	101.0	74.9	94.0	67.3	3.0

See footnotes at end of table.

Table CE1-12c. Total Energy Consumption in U.S. Households by West Census Region, 1997 (Continued)

	West Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Mountain	Pacific	
RSE Column Factor:	0.5	1.0	1.7	1.2	
Physical Units per Household²					
Physical Units of Total Consumption per Household, Fuels Used:					
Electricity (kWh)	10,219	8,549	9,424	8,203	2.6
Natural Gas (thousand cf)	83	60	77	53	3.8
Fuel Oil (gallons)	730	540	Q	559	16.0
Kerosene (gallons)	126	151	Q	Q	28.8
LPG (gallons)	488	491	687	369	12.2
Wood (cords)	1.4	1.2	1.5	1.0	11.1
Million Households					
Number of Households, Where the End Use Is:					
Space Heating ³	99.7	21.0	6.1	14.9	NF
Electric Air-Conditioning ⁴	72.6	8.7	2.9	5.7	6.9
Water Heating ⁵	100.8	21.6	6.1	15.5	NF
Refrigerators	101.3	21.7	6.2	15.6	NF
Appliances	101.5	21.8	6.2	15.6	NF
Quadrillion Btu					
Total Btu Consumption, Where the End Use Is:					
Space Heating	5.18	0.65	0.29	0.36	4.7
Electric Air-Conditioning	0.42	0.04	0.02	0.02	9.6
Water Heating	1.92	0.41	0.12	0.30	3.8
Refrigerators	0.46	0.09	0.03	0.06	2.5
Other Appliances and Lighting	2.27	0.44	0.13	0.31	3.0
Million Btu per Household²					
Total Btu Consumption per Household, Where the End Use Is:					
Space Heating	52.0	30.9	46.9	24.4	4.8
Electric Air-Conditioning	5.7	4.4	6.4	3.4	8.6
Water Heating	19.0	19.1	19.2	19.1	3.8
Refrigerators	4.5	4.1	4.4	4.1	2.5
Other Appliances and Lighting	22.4	20.2	21.2	19.9	3.0

¹ The RECS cannot be used to accurately estimate the number of households that do not use electricity.
² The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.
³ Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.
⁴ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.
⁵ Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.
 (*) = Value rounds to zero in the units displayed.
 NF = No applicable RSE row factor.
 Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
 Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
 Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

1997 Consumption and Expenditures Tables

Total Expenditures Tables

(20 pages, 76 kb)

Contents

Pages

CE1-1e. Total Energy Expenditures in U.S. Households by Climate Zone, 1997	2
CE1-2e. Total Energy Expenditures in U.S. Households by Year of Construction, 1997	2
CE1-3e. Total Energy Expenditures in U.S. Households by Household Income, 1997	2
CE1-4e. Total Energy Expenditures in U.S. Households by Type of Housing Unit, 1997	2
CE1-7e. Total Energy Expenditures in U.S. Households by Four Most Populated States, 1997	2
CE1-8e. Total Energy Expenditures in U.S. Households by Urban/Rural Location, 1997	2
CE1-9e. Total Energy Expenditures in U.S. Households by Northeast Census Region, 1997	2
CE1-10e. Total Energy Expenditures in U.S. Households by Midwest Census Region, 1997	2
CE1-11e. Total Energy Expenditures in U.S. Households by South Census Region, 1997	2
CE1-12e. Total Energy Expenditures in U.S. Households by West Census Region, 1997	2

These data are from the 1997 Residential Energy Consumption Survey (RECS) which provides information on the use of energy in residential housing units in the United States. The RECS is a national statistical survey that collects data for occupied primary housing units. RECS was first conducted in 1978; the sixth and most recent survey was conducted in 1997 RECS. The data were collected from a sample of 5,900 housing units statistically selected to represent the 101.5 million units in the United States. The 1997 data are available for the four Census regions, the nine Census divisions, and for the four most populous States--California, Florida, New York, and Texas.

Data provided here are in the public domain and may be reproduced without permission. Appropriate credit would be appreciated. A suggested citation is "U.S. Department of Energy, Energy Information Administration, *"A Look at Residential Energy Consumption in 1997."*

Electronic Products and Services

Users can view and download selected pages or entire reports, search for information, download data and analysis applications, and find out about new information products and services.

Contact: Robert Latta, Survey Manager (rlatta@eia.doe.gov)

World Wide Web: <http://www.eia.doe.gov/emeu/consumption>

Table CE1-1e. Total Energy Expenditures in U.S. Households by Climate Zone, 1997

	Climate Zone ¹						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factor:	0.4	1.7	1.0	1.2	1.2	1.1	
Million Households							
Total U.S. Households	101.5	9.3	28.0	22.5	19.5	22.2	7.9
Number of Households, Fuels Used (more than one may apply):							
Electricity ²	101.4	9.2	28.0	22.5	19.5	22.2	7.9
Natural Gas	61.9	5.1	20.0	12.7	12.7	11.5	8.7
Fuel Oil	10.0	2.0	3.1	4.4	0.3	Q	17.2
Kerosene	3.5	0.4	0.8	0.9	0.9	0.4	19.1
LPG	8.1	1.4	1.9	1.6	1.7	1.4	23.3
Wood	15.0	2.0	3.3	3.5	3.4	2.9	11.5
Billion Dollars							
Total Expenditures, Fuels Used:							
Electricity	88.33	6.54	21.83	20.18	15.99	23.78	7.4
Natural Gas	35.81	3.28	14.57	8.30	5.01	4.65	10.3
Fuel Oil	7.11	1.52	2.55	2.91	0.12	Q	19.7
Kerosene	0.50	0.13	0.12	0.09	0.14	0.02	28.2
LPG	4.04	0.56	1.25	0.90	0.85	0.47	25.6
Total	135.79	12.04	40.32	32.38	22.11	28.95	6.8
Dollars per Household³							
Total Expenditures per Household, Fuels Used:							
Electricity	871	708	778	897	820	1,072	2.9
Natural Gas	579	643	729	654	395	406	3.6
Fuel Oil	714	756	814	656	448	Q	6.1
Kerosene	144	315	141	102	151	49	21.6
LPG	500	394	643	549	500	350	10.1
Total	1,338	1,301	1,438	1,439	1,133	1,305	2.3
Dollars per Million Btu³							
Average Price of Btu Consumption, Fuels Used:							
Electricity	24.97	22.48	26.14	25.19	25.76	24.05	2.6
Natural Gas	6.78	5.87	6.44	7.78	6.92	6.97	2.4
Fuel Oil	7.05	6.94	7.20	6.98	7.41	Q	1.0
Kerosene	8.51	8.21	8.69	8.40	8.59	9.63	2.4
LPG	11.23	10.52	10.58	11.36	11.95	12.61	5.2
Total	13.25	10.57	11.25	13.63	15.26	17.04	2.4

See footnotes at end of table.

Table CE1-1e. Total Energy Expenditures in U.S. Households by Climate Zone, 1997 (Continued)

	Climate Zone ¹						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factor:	0.4	1.7	1.0	1.2	1.2	1.1	
Price per Physical Unit³							
Average Price of Physical Units of Consumption, Fuels Used:							
Electricity (cents per kWh)	8.5	7.7	8.9	8.6	8.8	8.2	2.6
Natural Gas (dollars per thousand cf) ..	6.96	6.03	6.61	7.99	7.10	7.16	2.4
Fuel Oil (dollars per gallon)	0.98	0.96	1.00	0.97	1.03	Q	0.9
Kerosene (dollars per gallon)	1.15	1.11	1.17	1.13	1.16	1.30	2.4
LPG (dollars per gallon)	1.03	0.96	0.97	1.04	1.09	1.15	5.2
Million Households							
Number of Households, Where the End Use Is:							
Space Heating ⁴	99.7	8.9	27.8	22.2	19.2	21.5	8.0
Electric Air-Conditioning ⁵	72.6	5.2	18.2	17.6	12.0	19.6	8.4
Water Heating ⁶	100.8	9.2	27.9	22.3	19.4	21.9	7.9
Refrigerators	101.3	9.2	28.0	22.5	19.5	22.1	7.9
Appliances	101.5	9.3	28.0	22.5	19.5	22.2	7.9
Billion Dollars							
Total Expenditures, Where the End Use Is:							
Space Heating	42.03	4.80	15.95	11.60	5.14	4.53	8.1
Electric Air-Conditioning	10.20	0.25	1.25	1.84	1.70	5.16	10.4
Water Heating	19.76	1.74	5.40	4.63	3.70	4.28	6.9
Refrigerators	12.14	0.85	3.14	2.66	2.34	3.14	6.7
Other Appliances and Lighting	51.66	4.40	14.57	11.64	9.22	11.84	7.0
Dollars per Household³							
Total Expenditures per Household, Where the End Use Is:							
Space Heating	421	538	573	522	267	211	3.5
Electric Air-Conditioning	140	48	69	105	141	264	4.8
Water Heating	196	190	194	207	191	195	2.5
Refrigerators	120	92	112	118	121	142	2.9
Other Appliances and Lighting	509	475	520	517	473	534	2.7

¹ One of five climatically distinct areas, determined according to the 30-year average (1961-1990) of the annual heating and cooling degree-days. For this report, the heating or cooling degree-days are a measure of how cold or how hot a location is over a period of one year, relative to a base temperature of 65 degrees Fahrenheit. A household is assigned to a climate zone according to the 30-year average annual degree-days for an appropriate nearby weather station.

² The RECS cannot be used to accurately estimate the number of households that do not use electricity.

³ The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.

⁴ Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

⁵ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

⁶ Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE1-2e. Total Energy Expenditures in U.S. Households
by Year of Construction, 1997**

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ¹	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.7	1.3	1.0	1.1	1.1	0.8	
Million Households								
Total U.S. Households	101.5	9.7	17.3	19.6	14.4	12.5	27.9	4.2
Number of Households, Fuels Used (more than one may apply):								
Electricity ²	101.4	9.7	17.3	19.6	14.4	12.5	27.9	4.2
Natural Gas	61.9	5.2	7.5	9.5	9.6	9.2	20.9	6.1
Fuel Oil	10.0	0.3	0.6	1.0	1.5	1.5	5.0	14.6
Kerosene	3.5	0.2	0.5	0.8	0.4	0.3	1.4	18.4
LPG	8.1	0.9	1.2	1.7	1.1	0.7	2.5	14.0
Wood	15.0	1.6	3.7	3.4	2.2	1.4	2.8	9.8
Billion Dollars								
Total Expenditures, Fuels Used:								
Electricity	88.33	9.66	17.62	19.03	11.85	10.14	20.03	4.5
Natural Gas	35.81	2.91	3.83	4.75	4.88	5.30	14.15	7.3
Fuel Oil	7.11	0.22	0.44	0.63	0.97	1.08	3.77	16.8
Kerosene	0.50	0.03	0.06	0.09	0.05	0.03	0.23	29.9
LPG	4.04	0.48	0.59	0.75	0.50	0.28	1.44	16.7
Total	135.79	13.29	22.54	25.25	18.26	16.82	39.63	4.2
Dollars per Household³								
Total Expenditures per Household, Fuels Used:								
Electricity	871	997	1,018	973	821	808	718	2.6
Natural Gas	579	557	508	501	508	577	677	3.5
Fuel Oil	714	713	753	612	630	710	758	7.7
Kerosene	144	164	120	125	132	119	170	26.0
LPG	500	546	506	443	457	377	576	9.0
Total	1,338	1,369	1,302	1,291	1,264	1,340	1,420	2.0
Dollars per Million Btu³								
Average Price of Btu Consumption, Fuels Used:								
Electricity	24.97	23.35	23.97	23.81	25.42	26.21	27.21	1.5
Natural Gas	6.78	6.78	6.85	6.39	6.67	6.91	6.90	2.0
Fuel Oil	7.05	7.27	7.30	6.92	7.03	7.12	7.02	2.1
Kerosene	8.51	8.32	8.46	8.39	8.52	8.33	8.62	2.6
LPG	11.23	11.30	11.59	11.48	11.19	12.17	10.80	3.3
Total	13.25	14.48	15.95	14.77	13.17	12.63	11.37	1.9

See footnotes at end of table.

Table CE1-2e. Total Energy Expenditures in U.S. Households by Year of Construction, 1997 (Continued)

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ¹	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.7	1.3	1.0	1.1	1.1	0.8	
Price per Physical Unit³								
Average Price of Physical Units of Consumption, Fuels Used:								
Electricity (cents per kWh)	8.5	8.0	8.2	8.1	8.7	8.9	9.3	1.5
Natural Gas (dollars per thousand cf)	6.96	6.97	7.03	6.56	6.85	7.09	7.08	2.0
Fuel Oil (dollars per gallon)	0.98	1.01	1.01	0.96	0.97	0.99	0.97	2.1
Kerosene (dollars per gallon)	1.15	1.12	1.14	1.13	1.15	1.12	1.16	2.6
LPG (dollars per gallon)	1.03	1.03	1.06	1.05	1.02	1.11	0.99	3.3
Million Households								
Number of Households, Where the End Use Is:								
Space Heating ⁴	99.7	9.6	17.1	19.2	14.1	12.4	27.3	4.2
Electric Air-Conditioning ⁵	72.6	8.3	14.6	14.7	10.0	8.9	16.1	4.7
Water Heating ⁶	100.8	9.7	17.2	19.4	14.3	12.5	27.7	4.2
Refrigerators	101.3	9.7	17.3	19.5	14.4	12.5	27.8	4.2
Appliances	101.5	9.7	17.3	19.6	14.4	12.5	27.9	4.2
Billion Dollars								
Total Expenditures, Where the End Use Is:								
Space Heating	42.03	3.32	5.23	6.85	5.44	5.38	15.80	4.7
Electric Air-Conditioning	10.20	1.49	2.60	2.30	1.34	1.08	1.40	7.3
Water Heating	19.76	2.04	3.62	3.90	2.63	2.32	5.25	4.2
Refrigerators	12.14	1.07	2.08	2.31	1.79	1.62	3.27	4.6
Other Appliances and Lighting	51.66	5.37	9.01	9.88	7.06	6.44	13.90	4.4
Dollars per Household³								
Total Expenditures per Household, Where the End Use Is:								
Space Heating	421	347	306	357	385	433	578	3.0
Electric Air-Conditioning	140	179	177	157	134	121	87	5.5
Water Heating	196	211	210	202	184	185	190	2.2
Refrigerators	120	111	121	118	124	129	117	2.6
Other Appliances and Lighting	509	553	521	505	489	513	498	2.5

¹ New construction for 1997 includes only those housing units built and occupied between January and the April-August period when the household interviews were conducted.

² The RECS cannot be used to accurately estimate the number of households that do not use electricity.

³ The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.

⁴ Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

⁵ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

⁶ Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE1-3e. Total Energy Expenditures in U.S. Households by Household Income, 1997

	Total	1997 Household Income				Below Poverty Line	Eligible for Federal Assistance ¹	RSE Row Factors
		Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.6	1.5	1.0	0.9	1.0	1.3	1.0	
Million Households								
Total U.S. Households	101.5	13.3	29.1	31.1	27.9	14.6	34.1	2.7
Number of Households, Fuels Used (more than one may apply):								
Electricity ²	101.4	13.3	29.1	31.1	27.9	14.6	34.0	2.7
Natural Gas	61.9	8.0	17.0	19.0	17.9	9.1	20.4	4.3
Fuel Oil	10.0	1.3	2.5	3.2	3.0	1.4	3.4	10.4
Kerosene	3.5	0.4	1.2	1.2	0.6	0.6	1.4	14.5
LPG	8.1	1.0	2.4	2.7	1.9	1.2	2.8	12.7
Wood	15.0	0.7	3.0	4.7	6.7	1.1	3.0	9.4
Billion Dollars								
Total Expenditures, Fuels Used:								
Electricity	88.33	8.36	21.92	26.61	31.43	10.29	24.79	3.4
Natural Gas	35.81	3.74	8.82	11.17	12.08	4.35	10.54	5.4
Fuel Oil	7.11	0.66	1.52	2.21	2.73	0.69	1.97	12.1
Kerosene	0.50	0.08	0.19	0.18	0.06	0.12	0.22	23.4
LPG	4.04	0.43	1.20	1.39	1.02	0.50	1.34	14.8
Total	135.79	13.26	33.65	41.56	47.33	15.95	38.86	2.9
Dollars per Household³								
Total Expenditures per Household, Fuels Used:								
Electricity	871	630	752	855	1,126	703	728	2.3
Natural Gas	579	469	518	589	673	476	516	3.0
Fuel Oil	714	505	603	699	914	498	576	5.3
Kerosene	144	192	149	147	99	185	163	19.6
LPG	500	412	493	518	531	433	482	8.6
Total	1,338	997	1,155	1,335	1,696	1,088	1,140	1.6
Dollars per Million Btu³								
Average Price of Btu Consumption, Fuels Used:								
Electricity	24.97	25.05	24.70	24.63	25.44	25.04	25.16	1.3
Natural Gas	6.78	7.06	6.76	6.78	6.72	6.86	6.88	1.6
Fuel Oil	7.05	6.22	6.87	7.03	7.42	6.16	6.66	1.5
Kerosene	8.51	8.58	8.54	8.41	8.61	8.68	8.64	1.7
LPG	11.23	11.36	11.18	10.66	12.12	11.33	11.42	2.8
Total	13.25	13.05	13.23	13.01	13.55	13.12	13.15	1.8

See footnotes at end of table.

Table CE1-3e. Total Energy Expenditures in U.S. Households by Household Income, 1997 (Continued)

	Total	1997 Household Income				Below Poverty Line	Eligible for Federal Assistance ¹	RSE Row Factors
		Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.6	1.5	1.0	0.9	1.0	1.3	1.0	
Price per Physical Unit³								
Average Price of Physical Units of Consumption, Fuels Used:								
Electricity (cents per kWh)	8.5	8.5	8.4	8.4	8.7	8.5	8.6	1.3
Natural Gas (dollars per thousand cf)	6.96	7.25	6.94	6.96	6.90	7.04	7.07	1.6
Fuel Oil (dollars per gallon)	0.98	0.86	0.95	0.98	1.03	0.85	0.92	1.5
Kerosene (dollars per gallon)	1.15	1.16	1.15	1.14	1.16	1.17	1.17	1.7
LPG (dollars per gallon)	1.03	1.04	1.02	0.97	1.11	1.03	1.04	2.8
Million Households								
Number of Households, Where the End Use Is:								
Space Heating ⁴	99.7	12.8	28.5	30.7	27.6	14.0	33.0	2.8
Electric Air-Conditioning ⁵	72.6	8.1	19.3	23.1	22.2	8.3	20.9	3.6
Water Heating ⁶	100.8	13.0	29.0	31.0	27.7	14.4	33.7	2.8
Refrigerators	101.3	13.2	29.1	31.1	27.9	14.6	34.0	2.8
Appliances	101.5	13.3	29.1	31.1	27.9	14.6	34.1	2.7
Billion Dollars								
Total Expenditures, Where the End Use Is:								
Space Heating	42.03	4.33	10.78	13.12	13.79	4.73	12.20	3.3
Electric Air-Conditioning	10.20	0.91	2.39	2.86	4.04	1.00	2.48	6.1
Water Heating	19.76	2.08	5.22	6.14	6.33	2.71	6.40	3.0
Refrigerators	12.14	1.36	3.15	3.55	4.07	1.52	3.61	3.2
Other Appliances and Lighting	51.66	4.58	12.10	15.89	19.10	5.99	14.18	3.2
Dollars per Household³								
Total Expenditures per Household, Where the End Use Is:								
Space Heating	421	338	378	427	499	338	370	2.6
Electric Air-Conditioning	140	113	124	124	182	120	119	4.8
Water Heating	196	160	180	198	228	189	190	1.8
Refrigerators	120	103	108	114	146	104	106	2.0
Other Appliances and Lighting	509	344	415	510	684	409	416	2.0

¹ Below 150 percent of poverty line or 60 percent of median State income.

² The RECS cannot be used to accurately estimate the number of households that do not use electricity.

³ The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.

⁴ Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

⁵ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

⁶ Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE1-4e. Total Energy Expenditures in U.S. Households by Type of Housing Unit, 1997

	Type of Housing Unit					RSE Row Factors
	Total	Single-Family	Multifamily		Mobile Home	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.5	0.5	1.9	1.4	1.5	
Million Households						
Total U.S. Households	101.5	73.7	5.6	15.8	6.3	4.0
Number of Households, Fuels Used (more than one may apply):						
Electricity ¹	101.4	73.7	5.6	15.8	6.3	4.0
Natural Gas	61.9	47.0	3.8	8.8	2.3	6.1
Fuel Oil	10.0	7.5	0.5	1.8	Q	13.5
Kerosene	3.5	2.7	Q	Q	0.6	15.8
LPG	8.1	6.2	Q	Q	1.7	15.2
Wood	15.0	14.0	Q	0.2	0.7	13.1
Billion Dollars						
Total Expenditures, Fuels Used:						
Electricity	88.33	70.33	3.47	8.84	5.68	4.3
Natural Gas	35.81	29.97	2.36	2.46	1.02	7.9
Fuel Oil	7.11	6.13	0.35	0.59	Q	16.8
Kerosene	0.50	0.32	Q	Q	0.16	27.2
LPG	4.04	3.25	Q	Q	0.72	17.0
Total	135.79	110.00	6.23	11.94	7.62	3.7
Dollars per Household²						
Total Expenditures per Household, Fuels Used:						
Electricity	871	954	617	560	899	2.6
Natural Gas	579	638	616	281	438	3.6
Fuel Oil	714	814	728	323	Q	6.7
Kerosene	144	116	Q	Q	270	21.3
LPG	500	524	Q	Q	423	8.0
Total	1,338	1,492	1,108	755	1,206	1.8
Dollars per Million Btu²						
Average Price of Btu Consumption, Fuels Used:						
Electricity	24.97	24.79	27.79	27.41	22.45	1.6
Natural Gas	6.78	6.72	7.01	7.62	6.27	2.1
Fuel Oil	7.05	7.34	7.21	4.99	Q	1.7
Kerosene	8.51	8.60	Q	Q	8.35	2.0
LPG	11.23	11.15	Q	Q	11.57	2.9
Total	13.25	13.00	12.10	15.53	15.17	2.2

See footnotes at end of table.

Table CE1-4e. Total Energy Expenditures in U.S. Households by Type of Housing Unit, 1997 (Continued)

	Type of Housing Unit					RSE Row Factors
	Total	Single-Family	Multifamily		Mobile Home	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.5	0.5	1.9	1.4	1.5	
Price per Physical Unit²						
Average Price of Physical Units of Consumption, Fuels Used:						
Electricity (cents per kWh)	8.5	8.5	9.5	9.4	7.7	1.6
Natural Gas (dollars per thousand cf)	6.96	6.90	7.20	7.83	6.44	2.1
Fuel Oil (dollars per gallon)	0.98	1.02	1.00	0.69	Q	1.7
Kerosene (dollars per gallon)	1.15	1.16	Q	Q	1.13	2.0
LPG (dollars per gallon)	1.03	1.02	Q	Q	1.06	2.9
Million Households						
Number of Households, Where the End Use Is:						
Space Heating ³	99.7	72.7	5.6	15.3	6.1	4.1
Electric Air-Conditioning ⁴	72.6	53.8	3.4	10.9	4.5	4.8
Water Heating ⁵	100.8	73.4	5.6	15.5	6.3	4.0
Refrigerators	101.3	73.7	5.6	15.7	6.3	4.0
Appliances	101.5	73.7	5.6	15.8	6.3	4.0
Billion Dollars						
Total Expenditures, Where the End Use Is:						
Space Heating	42.03	35.07	2.45	2.34	2.18	4.5
Electric Air-Conditioning	10.20	8.06	0.29	1.06	0.79	7.6
Water Heating	19.76	14.89	0.97	2.57	1.34	4.0
Refrigerators	12.14	9.55	0.57	1.43	0.59	4.2
Other Appliances and Lighting	51.66	42.44	1.95	4.54	2.73	4.0
Dollars per Household²						
Total Expenditures per Household, Where the End Use Is:						
Space Heating	421	482	436	153	357	3.2
Electric Air-Conditioning	140	150	85	98	175	5.6
Water Heating	196	203	173	165	213	2.3
Refrigerators	120	130	102	91	93	2.5
Other Appliances and Lighting	509	576	347	288	432	2.2

¹ The RECS cannot be used to accurately estimate the number of households that do not use electricity.

² The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.

³ Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

⁴ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

⁵ Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE1-7e. Total Energy Expenditures in U.S. Households
by Four Most Populated States, 1997**

	Total U.S.	Four Most Populated States				RSE Row Factors
		New York	California	Texas	Florida	
RSE Column Factor:	0.4	1.0	1.1	1.6	1.5	
Million Households						
Total U.S. Households	101.5	6.8	11.5	7.0	5.9	NF
Number of Households, Fuels Used (more than one may apply):						
Electricity ¹	101.4	6.8	11.5	7.0	5.9	NF
Natural Gas	61.9	5.1	9.7	4.7	1.2	5.9
Fuel Oil	10.0	2.9	Q	Q	Q	20.0
Kerosene	3.5	Q	Q	Q	Q	25.1
LPG	8.1	0.6	0.4	0.3	0.4	21.4
Wood	15.0	0.8	2.1	0.9	0.7	15.8
Billion Dollars						
Total Expenditures, Fuels Used:						
Electricity	88.33	5.78	8.13	7.53	7.00	4.6
Natural Gas	35.81	3.74	3.17	1.88	0.41	9.2
Fuel Oil	7.11	2.03	Q	Q	Q	26.4
Kerosene	0.50	Q	Q	Q	Q	46.5
LPG	4.04	0.15	0.21	0.16	0.08	26.5
Total	135.79	11.77	11.57	9.57	7.51	3.0
Dollars per Household²						
Total Expenditures per Household, Fuels Used:						
Electricity	871	846	709	1,081	1,180	4.6
Natural Gas	579	731	327	400	358	6.6
Fuel Oil	714	699	Q	Q	Q	10.6
Kerosene	144	381	Q	Q	Q	29.6
LPG	500	271	490	489	201	14.7
Total	1,338	1,724	1,008	1,374	1,266	3.0
Dollars per Million Btu²						
Average Price of Btu Consumption, Fuels Used:						
Electricity	24.97	42.18	34.15	22.52	24.34	1.8
Natural Gas	6.78	9.63	6.73	5.90	13.16	3.5
Fuel Oil	7.05	6.78	Q	Q	Q	1.7
Kerosene	8.51	8.46	Q	Q	Q	1.9
LPG	11.23	16.11	12.51	9.96	19.09	5.8
Total	13.25	13.97	15.76	14.29	23.05	3.2

See footnotes at end of table.

Table CE1-7e. Total Energy Expenditures in U.S. Households by Four Most Populated States, 1997 (Continued)

	Four Most Populated States					RSE Row Factors
	Total U.S.	New York	California	Texas	Florida	
RSE Column Factor:	0.4	1.0	1.1	1.6	1.5	
Price per Physical Unit²						
Average Price of Physical Units of Consumption, Fuels Used:						
Electricity (cents per kWh)	8.5	14.4	11.7	7.7	8.3	1.8
Natural Gas (dollars per thousand cf)	6.96	9.89	6.91	6.06	13.51	3.5
Fuel Oil (dollars per gallon)	0.98	0.94	Q	Q	Q	1.7
Kerosene (dollars per gallon)	1.15	1.14	Q	Q	Q	1.9
LPG (dollars per gallon)	1.03	1.47	1.14	0.91	1.74	5.8
Million Households						
Number of Households, Where the End Use Is:						
Space Heating ³	99.7	6.7	11.2	6.9	5.7	1.5
Electric Air-Conditioning ⁴	72.6	4.2	4.6	6.3	5.6	3.3
Water Heating ⁵	100.8	6.8	11.4	6.9	5.8	NF
Refrigerators	101.3	6.8	11.4	7.0	5.9	NF
Appliances	101.5	6.8	11.5	7.0	5.9	NF
Billion Dollars						
Total Expenditures, Where the End Use Is:						
Space Heating	42.03	4.45	1.91	1.72	0.47	5.9
Electric Air-Conditioning	10.20	0.34	0.58	1.69	1.80	10.3
Water Heating	19.76	1.65	2.00	1.28	1.19	3.0
Refrigerators	12.14	1.00	1.54	1.01	0.84	3.5
Other Appliances and Lighting	51.66	4.33	5.54	3.86	3.21	4.2
Dollars per Household²						
Total Expenditures per Household, Where the End Use Is:						
Space Heating	421	661	170	248	83	6.0
Electric Air-Conditioning	140	80	127	266	322	8.0
Water Heating	196	244	175	185	206	2.9
Refrigerators	120	147	134	146	141	3.5
Other Appliances and Lighting	509	634	483	555	541	4.2

¹ The RECS cannot be used to accurately estimate the number of households that do not use electricity.
² The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.
³ Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.
⁴ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.
⁵ Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.
 NF = No applicable RSE row factor.
 Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
 Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
 Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE1-8e. Total Energy Expenditures in U.S. Households by Urban/Rural Location, 1997

	Urban/Rural Location ¹					RSE Row Factors
	Total	City	Town	Suburbs	Rural	
	0.5	0.9	1.3	1.3	1.2	
RSE Column Factor:						
Million Households						
Total U.S. Households	101.5	48.2	18.2	18.6	16.5	4.1
Number of Households, Fuels Used (more than one may apply):						
Electricity ²	101.4	48.2	18.2	18.6	16.4	4.1
Natural Gas	61.9	35.4	10.5	12.2	3.8	5.7
Fuel Oil	10.0	3.2	2.4	1.6	2.8	11.7
Kerosene	3.5	1.0	0.6	0.5	1.4	16.2
LPG	8.1	0.9	1.4	0.6	5.1	14.8
Wood	15.0	3.5	2.8	3.7	5.0	8.9
Billion Dollars						
Total Expenditures, Fuels Used:						
Electricity	88.33	36.44	15.57	18.93	17.38	4.1
Natural Gas	35.81	19.34	6.36	7.81	2.30	7.1
Fuel Oil	7.11	1.86	1.77	1.31	2.17	13.4
Kerosene	0.50	0.09	0.13	0.03	0.25	24.8
LPG	4.04	0.29	0.76	0.19	2.79	17.7
Total	135.79	58.04	24.59	28.28	24.89	3.6
Dollars per Household³						
Total Expenditures per Household, Fuels Used:						
Electricity	871	756	855	1,019	1,058	2.1
Natural Gas	579	547	605	641	600	3.0
Fuel Oil	714	584	742	832	772	5.2
Kerosene	144	98	220	52	180	18.7
LPG	500	327	526	330	543	9.1
Total	1,338	1,203	1,350	1,522	1,513	1.7
Dollars per Million Btu³						
Average Price of Btu Consumption, Fuels Used:						
Electricity	24.97	25.66	25.09	25.45	23.11	1.5
Natural Gas	6.78	6.72	6.74	6.99	6.73	1.8
Fuel Oil	7.05	6.54	7.15	7.58	7.16	1.4
Kerosene	8.51	8.84	8.35	8.92	8.43	1.7
LPG	11.23	12.63	10.70	13.60	11.11	3.3
Total	13.25	12.57	12.96	13.78	14.84	1.8

See footnotes at end of table.

Table CE1-8e. Total Energy Expenditures in U.S. Households by Urban/Rural Location, 1997 (Continued)

	Urban/Rural Location ¹					RSE Row Factors
	Total	City	Town	Suburbs	Rural	
RSE Column Factor:	0.5	0.9	1.3	1.3	1.2	
Price per Physical Unit³						
Average Price of Physical Units of Consumption, Fuels Used:						
Electricity (cents per kWh)	8.5	8.8	8.6	8.7	7.9	1.5
Natural Gas (dollars per thousand cf)	6.96	6.90	6.92	7.18	6.92	1.8
Fuel Oil (dollars per gallon)	0.98	0.91	0.99	1.05	0.99	1.4
Kerosene (dollars per gallon)	1.15	1.19	1.13	1.20	1.14	1.8
LPG (dollars per gallon)	1.03	1.15	0.98	1.24	1.01	3.3
Million Households						
Number of Households, Where the End Use Is:						
Space Heating ⁴	99.7	47.4	18.0	18.4	15.9	4.1
Electric Air-Conditioning ⁵	72.6	33.1	13.1	14.8	11.5	4.4
Water Heating ⁶	100.8	47.8	18.2	18.6	16.2	4.1
Refrigerators	101.3	48.1	18.2	18.6	16.4	4.1
Appliances	101.5	48.2	18.2	18.6	16.5	4.1
Billion Dollars						
Total Expenditures, Where the End Use Is:						
Space Heating	42.03	17.54	8.46	8.17	7.86	4.4
Electric Air-Conditioning	10.20	4.58	1.48	2.61	1.53	6.3
Water Heating	19.76	8.57	3.60	3.74	3.86	3.9
Refrigerators	12.14	5.61	2.05	2.54	1.94	4.0
Other Appliances and Lighting	51.66	21.73	8.99	11.23	9.71	3.8
Dollars per Household³						
Total Expenditures per Household, Where the End Use Is:						
Space Heating	421	370	469	444	495	2.7
Electric Air-Conditioning	140	138	113	176	132	4.5
Water Heating	196	179	198	202	238	1.8
Refrigerators	120	117	113	137	118	2.2
Other Appliances and Lighting	509	451	494	604	590	2.0

¹ Based on the household respondent's description rather than the Federal Government definition.
² The RECS cannot be used to accurately estimate the number of households that do not use electricity.
³ The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.
⁴ Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.
⁵ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.
⁶ Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE1-9e. Total Energy Expenditures in U.S. Households
by Northeast Census Region, 1997**

	Northeast Census Region				RSE Row Factors
	Total U.S.	Census Division			
		Total	Middle Atlantic	New England	
			0.6	1.0	
RSE Column Factor:					
Million Households					
Total U.S. Households	101.5	19.7	14.4	5.3	NF
Number of Households, Fuels Used (more than one may apply):					
Electricity ¹	101.4	19.7	14.4	5.3	NF
Natural Gas	61.9	11.8	9.9	1.9	7.4
Fuel Oil	10.0	7.5	4.6	2.9	10.1
Kerosene	3.5	1.0	0.6	0.4	20.4
LPG	8.1	1.6	1.0	0.6	18.1
Wood	15.0	2.5	1.6	0.9	11.3
Billion Dollars					
Total Expenditures, Fuels Used:					
Electricity	88.33	17.04	12.50	4.54	2.8
Natural Gas	35.81	9.13	7.53	1.59	9.5
Fuel Oil	7.11	5.61	3.27	2.34	12.4
Kerosene	0.50	0.24	0.12	0.12	30.8
LPG	4.04	0.44	0.29	0.15	21.3
Total	135.79	32.45	23.70	8.75	1.6
Dollars per Household²					
Total Expenditures per Household, Fuels Used:					
Electricity	871	863	867	854	2.8
Natural Gas	579	772	763	819	3.5
Fuel Oil	714	752	708	822	4.6
Kerosene	144	251	195	342	18.1
LPG	500	281	301	250	16.1
Total	1,338	1,644	1,643	1,647	1.6
Dollars per Million Btu²					
Average Price of Btu Consumption, Fuels Used:					
Electricity	24.97	34.92	34.73	35.45	2.2
Natural Gas	6.78	8.89	8.78	9.41	1.3
Fuel Oil	7.05	6.96	6.87	7.09	NF
Kerosene	8.51	8.29	8.29	8.29	1.9
LPG	11.23	15.06	15.12	14.96	5.3
Total	13.25	13.64	13.73	13.41	1.6

See footnotes at end of table.

Table CE1-9e. Total Energy Expenditures in U.S. Households by Northeast Census Region, 1997 (Continued)

	Northeast Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Middle Atlantic	New England	
			0.6	1.0	
RSE Column Factor:					
Price per Physical Unit²					
Average Price of Physical Units of Consumption, Fuels Used:					
Electricity (cents per kWh)	8.5	11.9	11.8	12.1	2.2
Natural Gas (dollars per thousand cf)	6.96	9.13	9.02	9.67	1.3
Fuel Oil (dollars per gallon)	0.98	0.96	0.95	0.98	NF
Kerosene (dollars per gallon)	1.15	1.12	1.12	1.12	1.9
LPG (dollars per gallon)	1.03	1.38	1.38	1.37	5.3
Million Households					
Number of Households, Where the End Use Is:					
Space Heating ³	99.7	19.5	14.3	5.2	NF
Electric Air-Conditioning ⁴	72.6	12.2	9.7	2.5	4.2
Water Heating ⁵	100.8	19.6	14.3	5.3	0.7
Refrigerators	101.3	19.7	14.4	5.3	NF
Appliances	101.5	19.7	14.4	5.3	NF
Billion Dollars					
Total Expenditures, Where the End Use Is:					
Space Heating	42.03	12.83	9.18	3.65	1.9
Electric Air-Conditioning	10.20	0.90	0.77	0.13	7.5
Water Heating	19.76	4.56	3.26	1.30	2.0
Refrigerators	12.14	2.62	1.96	0.66	2.5
Other Appliances and Lighting	51.66	11.53	8.53	3.00	2.3
Dollars per Household²					
Total Expenditures per Household, Where the End Use Is:					
Space Heating	421	657	642	699	2.0
Electric Air-Conditioning	140	74	80	52	5.0
Water Heating	196	233	227	248	2.0
Refrigerators	120	133	136	124	2.5
Other Appliances and Lighting	509	584	591	566	2.3

1 The RECS cannot be used to accurately estimate the number of households that do not use electricity.
2 The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.
3 Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.
4 The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.
5 Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.
NF = No applicable RSE row factor.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE1-10e. Total Energy Expenditures in U.S. Households,
by Midwest Census Region, 1997**

	Midwest Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			East North Central	West North Central	
	RSE Column Factor:	0.5	1.0	1.2	
Million Households					
Total U.S. Households	101.5	24.1	16.9	7.2	NF
Number of Households, Fuels Used (more than one may apply):					
Electricity ¹	101.4	24.1	16.9	7.2	NF
Natural Gas	61.9	18.5	13.7	4.9	5.0
Fuel Oil	10.0	1.1	0.6	0.4	17.5
Kerosene	3.5	0.4	0.4	Q	16.5
LPG	8.1	2.3	1.2	1.2	20.8
Wood	15.0	2.6	1.7	0.9	12.2
Billion Dollars					
Total Expenditures, Fuels Used:					
Electricity	88.33	18.21	12.73	5.48	3.8
Natural Gas	35.81	12.96	9.76	3.20	6.5
Fuel Oil	7.11	0.71	0.45	0.26	20.1
Kerosene	0.50	Q	Q	Q	33.0
LPG	4.04	1.68	0.99	0.69	19.9
Total	135.79	33.60	23.96	9.63	1.9
Dollars per Household²					
Total Expenditures per Household, Fuels Used:					
Electricity	871	757	753	766	3.8
Natural Gas	579	699	715	654	2.8
Fuel Oil	714	678	696	651	4.5
Kerosene	144	Q	Q	Q	25.4
LPG	500	726	857	596	8.7
Total	1,338	1,396	1,417	1,347	1.9
Dollars per Million Btu²					
Average Price of Btu Consumption, Fuels Used:					
Electricity	24.97	24.39	25.56	22.05	2.2
Natural Gas	6.78	5.89	5.83	6.10	1.5
Fuel Oil	7.05	6.86	7.05	6.56	1.6
Kerosene	8.51	9.01	8.96	Q	5.5
LPG	11.23	9.85	10.27	9.31	2.4
Total	13.25	10.42	10.25	10.86	2.8

See footnotes at end of table.

Table CE1-10e. Total Energy Expenditures in U.S. Households, by Midwest Census Region, 1997 (Continued)

	Midwest Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			East North Central	West North Central	
	RSE Column Factor:	0.5	1.0	1.2	
Price per Physical Unit²					
Average Price of Physical Units of Consumption, Fuels Used:					
Electricity (cents per kWh)	8.5	8.3	8.7	7.5	2.2
Natural Gas (dollars per thousand cf)	6.96	6.05	5.99	6.26	1.5
Fuel Oil (dollars per gallon)	0.98	0.95	0.98	0.91	1.6
Kerosene (dollars per gallon)	1.15	1.22	1.21	Q	5.5
LPG (dollars per gallon)	1.03	0.90	0.94	0.85	2.4
Million Households					
Number of Households, Where the End Use Is:					
Space Heating ³	99.7	23.8	16.8	7.0	0.7
Electric Air-Conditioning ⁴	72.6	18.6	12.4	6.3	2.2
Water Heating ⁵	100.8	23.9	16.8	7.1	NF
Refrigerators	101.3	24.0	16.9	7.1	NF
Appliances	101.5	24.1	16.9	7.2	NF
Billion Dollars					
Total Expenditures, Where the End Use Is:					
Space Heating	42.03	13.03	9.38	3.65	2.5
Electric Air-Conditioning	10.20	1.52	0.95	0.56	5.3
Water Heating	19.76	4.28	2.99	1.29	3.2
Refrigerators	12.14	2.61	1.87	0.74	2.6
Other Appliances and Lighting	51.66	12.16	8.77	3.39	2.7
Dollars per Household²					
Total Expenditures per Household, Where the End Use Is:					
Space Heating	421	548	560	519	2.6
Electric Air-Conditioning	140	81	77	90	4.6
Water Heating	196	179	178	182	3.2
Refrigerators	120	109	111	103	2.6
Other Appliances and Lighting	509	506	519	474	2.7

1 The RECS cannot be used to accurately estimate the number of households that do not use electricity.
2 The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.
3 Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.
4 The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.
5 Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.
NF = No applicable RSE row factor.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE1-11e. Total Energy Expenditures in U.S. Households
by South Census Region, 1993**

	South Census Region					RSE Row Factors
	Total U.S.	Census Division			West South Central	
		Total	South Atlantic	East South Central		
RSE Column Factor:	0.5	0.9	1.1	1.3	1.6	
Million Households						
Total U.S. Households	101.5	35.9	18.7	6.3	10.8	NF
Number of Households, Fuels Used (more than one may apply):						
Electricity ¹	101.4	35.9	18.7	6.3	10.8	NF
Natural Gas	61.9	16.4	6.4	2.7	7.3	7.1
Fuel Oil	10.0	1.2	1.1	Q	Q	28.6
Kerosene	3.5	1.9	1.3	0.4	Q	16.1
LPG	8.1	3.2	1.6	1.1	0.5	18.3
Wood	15.0	5.7	3.3	1.1	1.3	9.1
Billion Dollars						
Total Expenditures, Fuels Used:						
Electricity	88.33	37.24	19.74	5.99	11.52	3.3
Natural Gas	35.81	8.16	3.68	1.27	3.21	8.9
Fuel Oil	7.11	0.62	0.60	Q	Q	29.4
Kerosene	0.50	0.19	0.15	0.04	Q	24.6
LPG	4.04	1.44	0.71	0.49	0.24	19.4
Total	135.79	47.65	24.87	7.80	14.97	2.3
Dollars per Household²						
Total Expenditures per Household, Fuels Used:						
Electricity	871	1,038	1,056	944	1,063	3.3
Natural Gas	579	496	572	475	437	5.0
Fuel Oil	714	530	528	Q	Q	6.8
Kerosene	144	102	114	88	Q	23.9
LPG	500	445	432	453	466	6.1
Total	1,338	1,328	1,330	1,230	1,381	2.3
Dollars per Million Btu²						
Average Price of Btu Consumption, Fuels Used:						
Electricity	24.97	22.33	23.66	18.58	22.53	2.0
Natural Gas	6.78	7.24	8.62	6.86	6.24	3.8
Fuel Oil	7.05	8.01	8.09	Q	Q	1.5
Kerosene	8.51	8.75	8.69	8.67	Q	1.8
LPG	11.23	12.34	13.52	11.71	10.78	3.3
Total	13.25	15.83	17.71	14.03	14.28	3.3

See footnotes at end of table.

Table CE1-11e. Total Energy Expenditures in U.S. Households by South Census Region, 1993 (Continued)

	South Census Region					RSE Row Factors
	Total U.S.	Census Division			Total	
		Total	South Atlantic	East South Central		
RSE Column Factor:	0.5	0.9	1.1	1.3	1.6	
Price per Physical Unit²						
Average Price of Physical Units of Consumption, Fuels Used:						
Electricity (cents per kWh)	8.5	7.6	8.1	6.3	7.7	2.0
Natural Gas (dollars per thousand cf)	6.96	7.44	8.85	7.05	6.41	3.8
Fuel Oil (dollars per gallon)	0.98	1.11	1.12	Q	Q	1.5
Kerosene (dollars per gallon)	1.15	1.18	1.17	1.17	Q	1.8
LPG (dollars per gallon)	1.03	1.13	1.23	1.07	0.98	3.3
Million Households						
Number of Households, Where the End Use Is:						
Space Heating ³	99.7	35.4	18.3	6.3	10.8	NF
Electric Air-Conditioning ⁴	72.6	33.2	17.2	6.0	10.0	1.6
Water Heating ⁵	100.8	35.7	18.5	6.3	10.8	NF
Refrigerators	101.3	35.8	18.7	6.3	10.8	NF
Appliances	101.5	35.9	18.7	6.3	10.8	NF
Billion Dollars						
Total Expenditures, Where the End Use Is:						
Space Heating	42.03	11.10	5.88	2.25	2.97	4.5
Electric Air-Conditioning	10.20	6.67	3.36	0.80	2.51	5.1
Water Heating	19.76	7.25	3.98	1.25	2.02	2.7
Refrigerators	12.14	4.41	2.21	0.67	1.53	2.9
Other Appliances and Lighting	51.66	18.21	9.44	2.84	5.93	2.7
Dollars per Household²						
Total Expenditures per Household, Where the End Use Is:						
Space Heating	421	314	321	358	275	4.5
Electric Air-Conditioning	140	201	195	133	251	4.7
Water Heating	196	203	215	197	187	2.7
Refrigerators	120	123	118	105	141	2.9
Other Appliances and Lighting	509	508	505	448	548	2.7

¹ The RECS cannot be used to accurately estimate the number of households that do not use electricity.

² The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.

³ Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

⁴ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

⁵ Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE1-12e. Total Energy Expenditures in U.S. Households by West Census Region, 1997

	West Census Region				RSE Row Factors
	Total U.S.	Census Division			
		Total	Mountain	Pacific	
			Total	Mountain	
RSE Column Factor:	0.4	1.1	1.7	1.2	
Million Households					
Total U.S. Households	101.5	21.8	6.2	15.6	NF
Number of Households, Fuels Used (more than one may apply):					
Electricity ¹	101.4	21.8	6.2	15.6	NF
Natural Gas	61.9	15.1	4.4	10.7	2.5
Fuel Oil	10.0	0.3	Q	0.2	25.4
Kerosene	3.5	0.2	Q	Q	21.7
LPG	8.1	1.0	0.4	0.6	18.2
Wood	15.0	4.2	1.1	3.1	9.2
Billion Dollars					
Total Expenditures, Fuels Used:					
Electricity	88.33	15.84	4.46	11.38	2.8
Natural Gas	35.81	5.57	1.83	3.75	5.3
Fuel Oil	7.11	0.17	Q	0.13	32.1
Kerosene	0.50	0.04	Q	Q	31.0
LPG	4.04	0.48	0.23	0.25	22.1
Total	135.79	22.10	6.56	15.54	2.5
Dollars per Household²					
Total Expenditures per Household, Fuels Used:					
Electricity	871	727	722	730	2.8
Natural Gas	579	369	412	351	3.7
Fuel Oil	714	608	Q	659	19.8
Kerosene	144	170	Q	Q	27.4
LPG	500	497	614	424	9.9
Total	1,338	1,013	1,062	994	2.5
Dollars per Million Btu²					
Average Price of Btu Consumption, Fuels Used:					
Electricity	24.97	24.94	22.46	26.07	1.5
Natural Gas	6.78	6.00	5.18	6.50	1.8
Fuel Oil	7.05	8.11	Q	8.50	9.9
Kerosene	8.51	8.33	Q	Q	2.9
LPG	11.23	11.09	9.79	12.59	5.0
Total	13.25	13.54	11.30	14.77	2.1

See footnotes at end of table.

Table CE1-12e. Total Energy Expenditures in U.S. Households by West Census Region, 1997 (Continued)

	West Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Mountain	Pacific	
RSE Column Factor:	0.4	1.1	1.7	1.2	
Price per Physical Unit²					
Average Price of Physical Units of Consumption, Fuels Used:					
Electricity (cents per kWh)	8.5	8.5	7.7	8.9	1.5
Natural Gas (dollars per thousand cf)	6.96	6.16	5.32	6.67	1.8
Fuel Oil (dollars per gallon)	0.98	1.12	Q	1.18	9.8
Kerosene (dollars per gallon)	1.15	1.12	Q	Q	2.9
LPG (dollars per gallon)	1.03	1.01	0.89	1.15	5.0
Million Households					
Number of Households, Where the End Use Is:					
Space Heating ³	99.7	21.0	6.1	14.9	NF
Electric Air-Conditioning ⁴	72.6	8.7	2.9	5.7	6.9
Water Heating ⁵	100.8	21.6	6.1	15.5	NF
Refrigerators	101.3	21.7	6.2	15.6	NF
Appliances	101.5	21.8	6.2	15.6	NF
Billion Dollars					
Total Expenditures, Where the End Use Is:					
Space Heating	42.03	5.07	1.83	3.24	3.1
Electric Air-Conditioning	10.20	1.11	0.48	0.63	10.0
Water Heating	19.76	3.67	0.96	2.71	2.5
Refrigerators	12.14	2.50	0.63	1.87	3.0
Other Appliances and Lighting	51.66	9.76	2.67	7.09	3.2
Dollars per Household²					
Total Expenditures per Household, Where the End Use Is:					
Space Heating	421	241	299	217	3.2
Electric Air-Conditioning	140	128	161	111	9.1
Water Heating	196	169	157	174	2.4
Refrigerators	120	115	102	120	3.0
Other Appliances and Lighting	509	448	432	454	3.2

1 The RECS cannot be used to accurately estimate the number of households that do not use electricity.
2 The averages for total and for appliances are over the set of all households; otherwise the averages are over the set of households using a given fuel or over the set using a given end use.
3 Households where the main or secondary space-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.
4 The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.
5 Households where the main or secondary water-heating fuel is electricity, natural gas, fuel oil, kerosene, or LPG.
NF = No applicable RSE row factor.
Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.
Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.
Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

1997 Consumption and Expenditures Tables

Space-Heating Consumption Tables

(34 pages, 110 kb)

Contents

Pages

CE2-1c. Space-Heating Energy Consumption in U.S. Households by Climate Zone, 1997	3
CE2-2c. Space-Heating Energy Consumption in U.S. Households by Year of Construction, 1997	3
CE2-3c. Space-Heating Energy Consumption in U.S. Households by Household Income, 1997	3
CE2-4c. Space-Heating Energy Consumption in U.S. Households by Type of Housing Unit, 1997	3
CE2-5u. Space-Heating Energy Consumption and Expenditures in U.S. Households by Household Demographics, 1997	1
CE2-6u. Space-Heating Energy Consumption and Expenditures in U.S. Households by Usage Indicators, 1997	3
CE2-7c. Space-Heating Energy Consumption in U.S. Households by Four Most Populated States, 1997	3
CE2-8c. Space-Heating Energy Consumption in U.S. Households by Urban/Rural Location, 1997	3
CE2-9c. Space-Heating Energy Consumption in U.S. Households by Northeast Census Region, 1997	3
CE2-10c. Space-Heating Energy Consumption in U.S. Households by Midwest Census Region, 1997	3
CE2-11c. Space-Heating Energy Consumption in U.S. Households by South Census Region, 1997	3
CE2-12c. Space-Heating Energy Consumption in U.S. Households by West Census Region, 1997	3

These data are from the 1997 Residential Energy Consumption Survey (RECS) which provides information on the use of energy in residential housing units in the United States. The RECS is a national statistical survey that collects data for occupied primary housing units. RECS was first conducted in 1978; the sixth and most recent survey was conducted in 1997 RECS. The data were collected from a sample of 5,900 housing units statistically selected to represent the 101.5 million units in the United States. The 1997 data are available for the four Census regions, the nine Census divisions, and for the four most populous States--California, Florida, New York, and Texas.

Data provided here are in the public domain and may be reproduced without permission. Appropriate credit would be appreciated. A suggested citation is "U.S. Department of Energy, Energy Information Administration, *"A Look at Residential Energy Consumption in 1997."*

Electronic Products and Services

Users can view and download selected pages or entire reports, search for information, download data and analysis applications, and find out about new information products and services.

Contact: Robert Latta, Survey Manager (rlatta@eia.doe.gov)

World Wide Web: <http://www.eia.doe.gov/emeu/consumption>

Table CE2-1c. Space-Heating Energy Consumption in U.S. Households by Climate Zone, 1997

	Climate Zone ¹						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
		0.5	1.2	1.0	1.1		
RSE Column Factor:							
Million Households							
Total U.S. Households	101.5	9.3	28.0	22.5	19.5	22.2	8.3
No Space Heating	0.8	Q	Q	Q	Q	0.6	25.7
Space Heating	100.7	9.3	28.0	22.5	19.4	21.6	8.4
Not Using a Major Fuel ²	1.0	0.3	0.2	0.2	0.1	Q	33.5
Using a Major Fuel ²	99.7	8.9	27.8	22.2	19.2	21.5	8.5
For Main Space Heating	98.1	8.6	27.5	21.9	18.9	21.3	8.4
For Secondary Space Heating Only	1.6	0.3	0.4	0.4	0.4	Q	22.5
Number of Households with Space Heating, Major Fuels Used (more than one may apply):							
Electricity	42.0	2.7	8.0	9.6	8.8	12.9	8.8
Natural Gas	54.5	5.0	18.9	10.1	10.8	9.7	9.5
Fuel Oil	9.8	2.0	3.1	4.3	0.3	Q	17.6
Kerosene	3.5	0.4	0.8	0.9	0.9	0.4	18.9
LPG	5.6	0.7	1.4	1.1	1.4	1.0	27.1
Quadrillion Btu							
Space-Heating Btu Consumption, Major Fuels Used:							
Electricity	0.40	0.03	0.09	0.13	0.07	0.08	12.3
Natural Gas	3.61	0.43	1.67	0.77	0.38	0.37	12.1
Fuel Oil	0.85	0.19	0.31	0.33	0.02	Q	20.3
Kerosene	0.06	0.02	0.01	0.01	0.02	(*)	28.6
LPG	0.26	0.04	0.09	0.06	0.05	0.02	30.1
Total	5.18	0.71	2.17	1.30	0.54	0.47	9.4
Physical Units							
Physical Units of Space-Heating Consumption, Major Fuels Used:							
Electricity (billion kWh)	118	9	26	39	22	22	12.3
Natural Gas (billion cf)	3,517	419	1,627	745	370	356	12.1
Fuel Oil (million gallons)	6,133	1,405	2,218	2,382	112	Q	20.3
Kerosene (million gallons)	436	119	98	80	124	15	28.6
LPG (million gallons)	2,823	393	999	621	557	253	30.1
Million Btu per Household							
Average Space-Heating Btu Consumption per Household							
Using a Major Fuel ²	52.0	79.4	78.0	58.3	27.9	21.9	4.9
For Main Space Heating	52.5	80.8	78.7	59.2	28.2	22.0	4.9
For Secondary Space Heating Only ...	17.6	35.9	25.6	6.6	12.4	Q	28.4

See footnotes at end of table.

Table CE2-1c. Space-Heating Energy Consumption in U.S. Households by Climate Zone, 1997 (Continued)

	Climate Zone ¹						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factor:	0.5	1.2	1.0	1.1	1.2	1.2	
Million Households							
Number of Households, Where the Main Space-Heating Fuel Is:							
Electricity	29.6	1.1	4.3	6.8	6.5	10.9	10.5
Natural Gas	53.5	4.9	18.7	9.9	10.6	9.3	9.6
Fuel Oil	9.5	1.9	3.0	4.2	0.2	Q	17.4
Kerosene	1.0	0.2	0.2	0.1	0.3	Q	29.5
LPG	4.6	0.5	1.3	0.8	1.2	0.8	29.3
Other	2.6	0.6	0.6	0.6	0.5	0.3	22.9
No Space Heating	0.8	Q	Q	Q	Q	0.6	25.7
Million Btu per Household⁴							
Space-Heating Btu Consumption per Household,³ Where the Main Space-Heating Fuel Is:							
Electricity	12.8	25.8	19.1	18.9	10.7	6.5	6.2
Natural Gas	66.9	87.5	88.6	76.8	35.0	38.3	4.5
Fuel Oil	88.1	100.7	100.1	77.4	60.5	Q	6.4
Kerosene	41.5	58.0	59.6	46.7	31.6	Q	17.9
LPG	53.4	64.1	70.2	65.7	42.2	24.9	9.1
Physical Units (PU) per Household⁴							
Physical Units of Space-Heating Consumption per Household,³ Where the Main Space-Heating Fuel Is:							
Electricity (kWh)	3,760	7,564	5,589	5,547	3,148	1,914	6.2
Natural Gas (thousand cf)	65	85	86	75	34	37	4.5
Fuel Oil (gallons)	636	727	722	559	437	Q	6.4
Kerosene (gallons)	307	429	441	346	234	Q	17.8
LPG (gallons)	585	702	769	719	462	272	9.1
1997 Heating Degree-Days (HDD) per Household⁴							
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:							
Electricity	3,225	7,182	6,012	4,332	2,620	1,406	3.7
Natural Gas	4,710	7,844	6,410	4,839	2,176	2,396	3.4
Fuel Oil	5,707	7,431	6,218	4,843	3,474	Q	3.7
Kerosene	4,959	6,979	6,620	4,461	4,007	Q	8.2
LPG	4,863	7,743	6,673	5,203	3,363	2,069	5.3
Average for All Households	4,368	7,640	6,340	4,694	2,449	1,865	2.4

See footnotes at end of table.

Table CE2-1c. Space-Heating Energy Consumption in U.S. Households by Climate Zone, 1997 (Continued)

	Climate Zone ¹						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factor:	0.5	1.2	1.0	1.1	1.2	1.2	
Heated Square Footage (HSF) per Household⁴							
Heated Square Footage per Household,⁵ Where the Main Space-Heating Fuel Is:							
Electricity	1,468	1,589	1,376	1,618	1,364	1,462	3.8
Natural Gas	1,757	2,034	1,933	1,755	1,511	1,539	3.4
Fuel Oil	1,844	1,995	2,036	1,678	1,227	Q	3.9
Kerosene	1,023	1,202	821	1,093	1,041	Q	6.6
LPG	1,676	1,889	1,931	1,852	1,481	1,255	8.2
Average for All Households	1,667	1,937	1,850	1,698	1,447	1,485	2.3
Space-Heating Intensity [PU÷(HDD×(HSF÷1000))]⁴							
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:							
Electricity (kWh)	0.794	0.663	0.676	0.791	0.881	0.931	5.3
Natural Gas (cubic feet)	7.876	5.337	6.967	8.805	10.365	10.128	3.3
Fuel Oil (gallons)	0.060	0.049	0.057	0.069	0.103	Q	6.2
Kerosene (gallons)	0.061	0.051	0.081	0.071	0.056	Q	17.4
LPG (gallons)	0.072	0.048	0.060	0.075	0.093	0.105	10.7

¹ One of five climatically distinct areas, determined according to the 30-year average (1961-1990) of the annual heating and cooling degree-days. For this report, the heating or cooling degree-days are a measure of how cold or how hot a location is over a period of one year, relative to a base temperature of 65 degrees Fahrenheit. A household is assigned to a climate zone according to the 30-year average annual degree-days for an appropriate nearby weather station.

² The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

³ Includes only the space-heating consumption of the space-heating fuel. Not included are: 1) the consumption of the main space-heating fuel for uses other than space heating; 2) the consumption of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the consumption of other fuels that are used as secondary space-heating fuels.

⁴ Averages are for those households using each of the main space-heating fuels.

⁵ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

(*) = Value rounds to zero in the units displayed.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE2-2c. Space-Heating Energy Consumption in U.S. Households by Year of Construction, 1997

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ¹	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.5	1.2	1.0	1.1	1.1	0.9	
Million Households								
Total U.S. Households	101.5	9.7	17.3	19.6	14.4	12.5	27.9	4.3
No Space Heating	0.8	Q	Q	0.2	Q	Q	0.2	35.7
Space Heating	100.7	9.6	17.3	19.4	14.3	12.4	27.7	4.3
Not Using a Major Fuel ²	1.0	Q	0.2	0.2	0.2	Q	0.3	34.0
Using a Major Fuel ²	99.7	9.6	17.1	19.2	14.1	12.4	27.3	4.3
For Main Space Heating	98.1	9.5	16.8	18.8	13.9	12.3	26.8	4.3
For Secondary Space Heating Only	1.6	Q	0.3	0.4	0.2	0.1	0.5	23.4
Number of Households with Space Heating, Major Fuels Used (more than one may apply):								
Electricity	42.0	4.5	10.9	10.1	5.6	3.9	7.1	6.2
Natural Gas	54.5	4.7	6.5	8.3	8.5	8.3	18.3	6.4
Fuel Oil	9.8	0.3	0.6	1.0	1.5	1.5	4.9	14.8
Kerosene	3.5	0.2	0.5	0.8	0.4	0.3	1.4	18.4
LPG	5.6	0.7	0.9	1.2	0.7	0.6	1.6	15.5
Quadrillion Btu								
Space-Heating Btu Consumption, Major Fuels Used:								
Electricity	0.40	0.05	0.10	0.12	0.05	0.03	0.05	10.0
Natural Gas	3.61	0.27	0.34	0.49	0.49	0.52	1.50	7.9
Fuel Oil	0.85	0.03	0.05	0.08	0.11	0.12	0.46	17.2
Kerosene	0.06	(*)	0.01	0.01	0.01	(*)	0.03	30.4
LPG	0.26	0.03	0.03	0.05	0.03	0.02	0.10	18.0
Total	5.18	0.38	0.53	0.75	0.69	0.70	2.14	5.6
Physical Units								
Physical Units of Space-Heating Consumption, Major Fuels Used:								
Electricity (billion kWh)	118	14	29	36	14	9	16	10.0
Natural Gas (billion cf)	3,517	259	332	477	478	506	1,465	7.9
Fuel Oil (million gallons)	6,133	193	348	566	819	887	3,320	17.2
Kerosene (million gallons)	436	26	53	83	45	30	199	30.4
LPG (million gallons)	2,823	345	348	521	330	198	1,081	18.0
Million Btu per Household								
Average Space-Heating Btu Consumption per Household								
Using a Major Fuel ²	52.0	39.3	30.8	39.1	48.7	56.2	78.4	3.9
For Main Space Heating	52.5	39.7	31.2	39.6	49.1	56.5	79.4	3.9
For Secondary Space Heating Only	17.6	Q	5.9	15.8	18.5	23.7	25.2	29.3

See footnotes at end of table.

Table CE2-2c. Space-Heating Energy Consumption in U.S. Households by Year of Construction, 1997 (Continued)

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ¹	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.5	1.2	1.0	1.1	1.1	0.9	
Million Households								
Number of Households, Where the Main Space-Heating Fuel Is:								
Electricity	29.6	3.9	9.3	8.5	3.4	2.2	2.3	8.4
Natural Gas	53.5	4.7	6.2	8.1	8.3	8.1	18.1	6.5
Fuel Oil	9.5	0.3	0.5	1.0	1.5	1.4	4.7	14.6
Kerosene	1.0	Q	0.1	0.3	Q	Q	0.3	29.8
LPG	4.6	0.6	0.7	1.0	0.6	0.5	1.4	17.1
Other	2.6	Q	0.4	0.6	0.4	0.2	0.8	21.3
No Space Heating	0.8	Q	Q	0.2	Q	Q	0.2	35.7
Million Btu per Household⁴								
Space-Heating Btu Consumption per Household,³ Where the Main Space-Heating Fuel Is:								
Electricity	12.8	12.0	10.3	14.0	13.0	12.9	19.7	6.6
Natural Gas	66.9	56.1	53.3	60.0	58.0	63.7	83.1	4.1
Fuel Oil	88.1	95.5	87.0	77.5	75.2	84.7	95.1	6.9
Kerosene	41.5	Q	42.1	31.8	Q	Q	47.2	18.2
LPG	53.4	52.7	45.1	47.2	51.0	35.5	69.3	8.3
Physical Units (PU) per Household⁴								
Physical Units of Space-Heating Consumption per Household,³ Where the Main Space-Heating Fuel Is:								
Electricity (kWh)	3,760	3,529	3,028	4,091	3,812	3,786	5,771	6.6
Natural Gas (thousand cf)	65	55	52	58	57	62	81	4.1
Fuel Oil (gallons)	636	689	627	559	543	611	686	6.9
Kerosene (gallons)	307	Q	312	236	Q	Q	349	18.2
LPG (gallons)	585	577	494	517	558	389	759	8.3
1997 Heating Degree-Days (HDD) per Household⁴								
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:								
Electricity	3,225	3,362	3,038	3,293	3,182	3,048	3,742	5.9
Natural Gas	4,710	4,507	4,536	4,652	4,304	4,481	5,137	3.4
Fuel Oil	5,707	6,313	5,915	5,521	5,518	5,657	5,762	3.9
Kerosene	4,959	Q	6,111	4,141	Q	Q	4,820	12.5
LPG	4,863	4,973	4,771	4,248	4,525	4,145	5,680	7.3
Average for All Households	4,368	4,129	3,780	4,057	4,171	4,344	5,152	2.5

See footnotes at end of table.

Table CE2-2c. Space-Heating Energy Consumption in U.S. Households by Year of Construction, 1997 (Continued)

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ¹	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.5	1.2	1.0	1.1	1.1	0.9	
Heated Square Footage (HSF) per Household⁴								
Heated Square Footage per Household,⁵ Where the Main Space-Heating Fuel Is:								
Electricity	1,468	1,599	1,500	1,481	1,352	1,347	1,367	3.6
Natural Gas	1,757	2,468	2,041	1,676	1,660	1,565	1,641	3.0
Fuel Oil	1,844	3,043	2,204	1,880	1,683	1,757	1,805	5.6
Kerosene	1,023	Q	1,011	859	Q	Q	1,122	7.5
LPG	1,676	2,125	1,857	1,393	1,522	1,428	1,754	7.3
Average for All Households	1,667	2,099	1,733	1,573	1,574	1,541	1,646	2.1
Space-Heating Intensity [PU÷{HDD×(HSF÷1000)}]⁴								
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:								
Electricity (kWh)	0.794	0.657	0.665	0.839	0.886	0.922	1.128	4.8
Natural Gas (cubic feet)	7.876	4.909	5.606	7.496	7.908	8.848	9.595	3.1
Fuel Oil (gallons)	0.060	0.036	0.048	0.054	0.058	0.061	0.066	7.0
Kerosene (gallons)	0.061	Q	0.050	0.066	Q	Q	0.065	16.2
LPG (gallons)	0.072	0.055	0.056	0.087	0.081	0.066	0.076	10.0

¹ New construction for 1997 includes only those housing units built and occupied between January and the April-August period when the household interviews were conducted.

² The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

³ Includes only the space-heating consumption of the space-heating fuel. Not included are: 1) the consumption of the main space-heating fuel for uses other than space heating; 2) the consumption of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the consumption of other fuels that are used as secondary space-heating fuels.

⁴ Averages are for those households using each of the main space-heating fuels.

⁵ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

(*) = Value rounds to zero in the units displayed.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE2-3c. Space-Heating Energy Consumption in U.S. Households by Household Income, 1997

	Total	1997 Household Income				Below Poverty Line	Eligible for Federal Assistance ¹	RSE Row Factors
		Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.7	1.4	1.0	0.9	1.0	1.3	1.0	
Million Households								
Total U.S. Households	101.5	13.3	29.1	31.1	27.9	14.6	34.1	2.8
No Space Heating	0.8	0.2	0.4	0.1	Q	0.3	0.5	26.0
Space Heating	100.7	13.1	28.8	31.0	27.8	14.3	33.5	2.8
Not Using a Major Fuel ²	1.0	0.3	0.2	0.3	Q	0.3	0.6	26.1
Using a Major Fuel ²	99.7	12.8	28.5	30.7	27.6	14.0	33.0	2.9
For Main Space Heating	98.1	12.7	28.0	30.3	27.1	13.9	32.5	2.9
For Secondary Space Heating Only	1.6	Q	0.6	0.5	0.5	Q	0.4	18.6
Number of Households with Space Heating, Major Fuels Used (more than one may apply):								
Electricity	42.0	5.6	12.1	12.3	11.9	5.8	13.7	5.0
Natural Gas	54.5	6.4	14.9	17.1	16.1	7.3	17.0	4.7
Fuel Oil	9.8	1.3	2.5	3.1	2.9	1.4	3.4	10.4
Kerosene	3.5	0.4	1.2	1.2	0.6	0.6	1.4	14.4
LPG	5.6	0.7	1.7	2.1	1.2	0.8	1.9	14.2
Quadrillion Btu								
Space-Heating Btu Consumption, Major Fuels Used:								
Electricity	0.40	0.05	0.11	0.12	0.12	0.05	0.12	8.3
Natural Gas	3.61	0.36	0.91	1.14	1.21	0.40	1.01	6.1
Fuel Oil	0.85	0.08	0.19	0.27	0.32	0.08	0.24	12.5
Kerosene	0.06	0.01	0.02	0.02	0.01	0.01	0.03	23.5
LPG	0.26	0.03	0.08	0.10	0.05	0.03	0.08	16.8
Total	5.18	0.52	1.31	1.64	1.71	0.58	1.48	4.1
Physical Units								
Physical Units of Space-Heating Consumption, Major Fuels Used:								
Electricity (billion kWh)	118	14	33	34	37	16	36	8.3
Natural Gas (billion cf)	3,517	347	885	1,108	1,177	387	985	6.1
Fuel Oil (million gallons)	6,133	553	1,361	1,920	2,299	589	1,703	12.5
Kerosene (million gallons)	436	67	161	153	54	98	193	23.5
LPG (million gallons)	2,823	300	850	1,089	583	352	906	16.8
Million Btu per Household								
Average Space-Heating Btu Consumption per Household								
Using a Major Fuel ²	52.0	40.4	45.9	53.4	62.0	41.3	44.9	3.5
For Main Space Heating	52.5	40.6	46.5	54.0	62.7	41.5	45.2	3.6
For Secondary Space Heating Only	17.6	Q	15.1	14.9	24.5	Q	15.6	25.7

See footnotes at end of table.

Table CE2-3c. Space-Heating Energy Consumption in U.S. Households by Household Income, 1997 (Continued)

	Total	1997 Household Income				Below Poverty Line	Eligible for Federal Assistance ¹	RSE Row Factors
		Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.7	1.4	1.0	0.9	1.0	1.3	1.0	
Million Households								
Number of Households, Where the Main Space-Heating Fuel Is:								
Electricity	29.6	4.4	9.1	8.5	7.6	4.4	10.4	6.6
Natural Gas	53.5	6.2	14.7	16.6	15.9	7.2	16.8	4.8
Fuel Oil	9.5	1.3	2.4	3.0	2.8	1.3	3.3	10.4
Kerosene	1.0	0.2	0.3	0.4	Q	0.3	0.5	23.7
LPG	4.6	0.6	1.5	1.8	0.8	0.7	1.6	14.9
Other	2.6	0.4	0.8	0.7	0.6	0.4	1.0	18.0
No Space Heating	0.8	0.2	0.4	0.1	Q	0.3	0.5	26.0
Million Btu per Household⁴								
Space-Heating Btu Consumption per Household,³ Where the Main Space-Heating Fuel Is:								
Electricity	12.8	10.4	11.9	13.0	15.2	11.4	11.1	5.3
Natural Gas	66.9	56.6	61.5	67.4	75.5	55.3	59.9	3.6
Fuel Oil	88.1	60.1	77.0	86.9	111.8	60.3	71.3	5.6
Kerosene	41.5	33.3	38.0	45.9	Q	38.1	35.7	16.7
LPG	53.4	43.4	51.7	54.6	61.7	44.1	49.2	7.0
Physical Units (PU) per Household⁴								
Physical Units of Space-Heating Consumption per Household,³ Where the Main Space-Heating Fuel Is:								
Electricity (kWh)	3,760	3,059	3,474	3,798	4,462	3,347	3,265	5.3
Natural Gas (thousand cf)	65	55	60	66	74	54	58	3.6
Fuel Oil (gallons)	636	434	556	627	806	435	515	5.5
Kerosene (gallons)	307	247	282	340	Q	282	264	16.7
LPG (gallons)	585	475	566	598	676	483	538	7.0
1997 Heating Degree-Days (HDD) per Household⁴								
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:								
Electricity	3,225	3,429	3,122	3,227	3,228	3,356	3,317	4.3
Natural Gas	4,710	4,252	4,503	4,927	4,853	4,223	4,415	2.8
Fuel Oil	5,707	5,186	6,001	5,686	5,715	5,264	5,648	2.9
Kerosene	4,959	3,593	4,758	5,801	Q	3,722	4,123	12.1
LPG	4,863	4,326	4,725	5,185	4,806	4,440	4,598	6.6
Average for All Households	4,368	4,051	4,198	4,552	4,486	4,048	4,192	2.0

See footnotes at end of table.

Table CE2-3c. Space-Heating Energy Consumption in U.S. Households by Household Income, 1997 (Continued)

	Total	1997 Household Income				Below Poverty Line	Eligible for Federal Assistance ¹	RSE Row Factors
		Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.7	1.4	1.0	0.9	1.0	1.3	1.0	
Heated Square Footage (HSF) per Household⁴								
Heated Square Footage per Household,⁵ Where the Main Space-Heating Fuel Is:								
Electricity	1,468	981	1,226	1,468	2,037	1,080	1,140	2.6
Natural Gas	1,757	1,152	1,363	1,750	2,366	1,208	1,312	2.7
Fuel Oil	1,844	1,023	1,514	1,824	2,525	1,088	1,328	4.0
Kerosene	1,023	975	910	1,087	Q	1,001	963	7.0
LPG	1,676	1,092	1,448	1,833	2,201	1,103	1,411	5.3
Average for All Households	1,667	1,074	1,331	1,675	2,283	1,146	1,259	1.8
Space-Heating Intensity [PU÷(HDD×(HSF÷1000))]⁴								
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:								
Electricity (kWh)	0.794	0.910	0.907	0.802	0.678	0.923	0.863	3.8
Natural Gas (cubic feet)	7.876	11.242	9.758	7.610	6.406	10.564	10.068	3.1
Fuel Oil (gallons)	0.060	0.082	0.061	0.060	0.056	0.076	0.069	6.5
Kerosene (gallons)	0.061	0.070	0.065	0.054	Q	0.076	0.067	11.9
LPG (gallons)	0.072	0.101	0.083	0.063	0.064	0.099	0.083	8.8

¹ Below 150 percent of poverty line or 60 percent of median State income.

² The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

³ Includes only the space-heating consumption of the space-heating fuel. Not included are: 1) the consumption of the main space-heating fuel for uses other than space heating; 2) the consumption of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the consumption of other fuels that are used as secondary space-heating fuels.

⁴ Averages are for those households using each of the main space-heating fuels.

⁵ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE2-4c. Space-Heating Energy Consumption in U.S. Households by Type of Housing Unit, 1997

	Type of Housing Unit					RSE Row Factors
	Total	Single-Family	Multifamily		Mobile Home	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.6	0.6	1.8	1.2	1.4	
Million Households						
Total U.S. Households	101.5	73.7	5.6	15.8	6.3	4.2
No Space Heating	0.8	0.4	Q	0.3	Q	37.5
Space Heating	100.7	73.4	5.6	15.5	6.2	4.2
Not Using a Major Fuel ¹	1.0	0.6	Q	0.2	Q	34.5
Using a Major Fuel ¹	99.7	72.7	5.6	15.3	6.1	4.2
For Main Space Heating	98.1	71.3	5.6	15.3	5.9	4.3
For Secondary Space Heating Only	1.6	1.4	Q	Q	0.2	21.7
Number of Households with Space Heating, Major Fuels Used (more than one may apply):						
Electricity	42.0	28.0	2.1	8.7	3.2	6.6
Natural Gas	54.5	43.4	3.5	5.5	2.1	7.0
Fuel Oil	9.8	7.4	0.5	1.8	Q	13.1
Kerosene	3.5	2.7	Q	Q	0.6	14.8
LPG	5.6	4.4	Q	Q	1.1	15.4
Quadrillion Btu						
Space-Heating Btu Consumption, Major Fuels Used:						
Electricity	0.40	0.31	0.02	0.04	0.04	9.7
Natural Gas	3.61	3.11	0.24	0.15	0.12	8.9
Fuel Oil	0.85	0.74	0.04	0.07	Q	16.2
Kerosene	0.06	0.04	Q	Q	0.02	25.9
LPG	0.26	0.21	Q	Q	0.04	17.9
Total	5.18	4.39	0.30	0.26	0.23	5.7
Physical Units						
Physical Units of Space-Heating Consumption, Major Fuels Used:						
Electricity (billion kWh)	118	89	6	11	12	9.7
Natural Gas (billion cf)	3,517	3,024	234	144	115	8.9
Fuel Oil (million gallons)	6,133	5,307	282	501	Q	16.2
Kerosene (million gallons)	436	271	Q	Q	139	25.9
LPG (million gallons)	2,823	2,312	Q	Q	465	17.9
Million Btu per Household						
Average Space-Heating Btu Consumption per Household						
Using a Major Fuel ¹	52.0	60.4	54.2	16.9	37.0	4.6
For Main Space Heating	52.5	61.3	54.2	16.9	37.7	4.6
For Secondary Space Heating Only	17.6	18.3	Q	Q	12.3	29.5

See footnotes at end of table.

Table CE2-4c. Space-Heating Energy Consumption in U.S. Households by Type of Housing Unit, 1997 (Continued)

	Type of Housing Unit					RSE Row Factors
	Total	Single-Family	Multifamily		Mobile Home	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.6	0.6	1.8	1.2	1.4	
Million Households						
Number of Households, Where the Main Space-Heating Fuel Is:						
Electricity	29.6	17.7	1.6	7.9	2.4	8.6
Natural Gas	53.5	42.5	3.4	5.5	2.1	7.2
Fuel Oil	9.5	7.1	0.5	1.8	Q	13.2
Kerosene	1.0	0.5	Q	Q	0.4	26.0
LPG	4.6	3.5	Q	Q	1.0	16.7
Other	2.6	2.1	Q	0.2	0.3	23.7
No Space Heating	0.8	0.4	Q	0.3	Q	37.5
Million Btu per Household³						
Space-Heating Btu Consumption per Household,² Where the Main Space-Heating Fuel Is:						
Electricity	12.8	16.1	11.9	4.6	16.1	5.8
Natural Gas	66.9	72.4	69.7	26.8	56.3	4.7
Fuel Oil	88.1	101.5	83.5	38.4	Q	6.7
Kerosene	41.5	40.2	Q	Q	45.3	18.5
LPG	53.4	57.3	Q	Q	40.8	6.8
Physical Units (PU) per Household³						
Physical Units of Space-Heating Consumption per Household,² Where the Main Space-Heating Fuel Is:						
Electricity (kWh)	3,760	4,730	3,494	1,347	4,714	5.8
Natural Gas (thousand cf)	65	70	68	26	55	4.7
Fuel Oil (gallons)	636	733	602	277	Q	6.7
Kerosene (gallons)	307	298	Q	Q	336	18.5
LPG (gallons)	585	627	Q	Q	447	6.8
1997 Heating Degree-Days (HDD) per Household³						
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:						
Electricity	3,225	3,165	3,728	3,132	3,644	5.4
Natural Gas	4,710	4,679	5,111	4,713	4,665	3.6
Fuel Oil	5,707	5,878	6,139	4,960	Q	3.7
Kerosene	4,959	4,503	Q	Q	5,288	13.4
LPG	4,863	5,050	Q	Q	4,116	7.4
Average for All Households	4,368	4,439	4,816	3,930	4,215	2.7

See footnotes at end of table.

Table CE2-4c. Space-Heating Energy Consumption in U.S. Households by Type of Housing Unit, 1997 (Continued)

	Type of Housing Unit					RSE Row Factors
	Total	Single-Family	Multifamily		Mobile Home	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.6	0.6	1.8	1.2	1.4	
Heated Square Footage (HSF) per Household³						
Heated Square Footage per Household,⁴ Where the Main Space-Heating Fuel Is:						
Electricity	1,468	1,823	910	892	1,116	2.8
Natural Gas	1,757	1,979	1,020	824	893	2.4
Fuel Oil	1,844	2,176	976	812	Q	2.5
Kerosene	1,023	1,182	Q	Q	881	6.4
LPG	1,676	1,888	Q	Q	995	4.6
Average for All Households	1,667	1,950	982	858	998	1.7
Space-Heating Intensity [PU÷(HDD×(HSF÷1000))]³						
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:						
Electricity (kWh)	0.794	0.820	1.030	0.482	1.159	4.2
Natural Gas (cubic feet)	7.876	7.611	13.019	6.717	13.161	3.8
Fuel Oil (gallons)	0.060	0.057	0.100	0.069	Q	7.3
Kerosene (gallons)	0.061	0.056	Q	Q	0.072	13.9
LPG (gallons)	0.072	0.066	Q	Q	0.109	8.8

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the space-heating consumption of the space-heating fuel. Not included are: 1) the consumption of the main space-heating fuel for uses other than space heating; 2) the consumption of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the consumption of other fuels that are used as secondary space-heating fuels.

³ Averages are for those households using each of the main space-heating fuels.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE2-5u. Space-Heating Energy Consumption and Expenditures in U.S. Households by Household Demographics, 1997

Household Demographics	Space-Heating Energy					RSE Row Factors
	Households (millions)	Total		Per Household		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	
	RSE Column Factor:	0.9	1.3	1.1	1.0	
Total Households Using a Major Space-Heating Fuel¹	99.7	5.18	42.03	52.0	421	1.7
Household Size						
1 Person	25.1	1.13	9.44	45.2	376	3.2
2 Persons	32.6	1.77	14.42	54.4	442	2.6
3 Persons	17.0	0.91	7.38	53.5	434	3.4
4 Persons	15.0	0.81	6.51	54.0	433	3.8
5 Persons	6.2	0.34	2.67	55.2	429	6.1
6 or More Persons	3.7	0.21	1.60	55.0	429	9.2
1997 Household Income Category						
Less than \$5,000	3.5	0.16	1.26	44.6	356	8.7
\$5,000 to \$9,999	9.3	0.36	3.07	38.7	331	5.9
\$10,000 to \$14,999	10.0	0.44	3.56	44.5	356	6.1
\$15,000 to \$19,999	10.2	0.47	3.87	46.1	379	4.9
\$20,000 to \$24,999	8.3	0.39	3.35	47.4	403	4.8
\$25,000 to \$34,999	15.4	0.79	6.41	51.6	417	3.9
\$35,000 to \$49,999	15.4	0.85	6.72	55.1	437	3.2
\$50,000 to \$74,999	16.3	0.99	7.87	60.7	484	4.2
\$75,000 or More	11.3	0.73	5.91	64.0	521	5.0
Below Poverty Line						
100 Percent	14.0	0.58	4.73	41.3	338	4.7
125 Percent	18.8	0.78	6.47	41.4	344	4.5
150 Percent	25.7	1.08	8.93	42.0	347	3.8
Eligible for Federal Assistance²	33.0	1.48	12.20	44.9	370	3.4
Age of Householder						
Under 25 Years	5.6	0.17	1.43	29.7	256	7.2
25 to 34 Years	18.1	0.74	6.16	41.0	340	4.0
35 to 44 Years	22.6	1.16	9.37	51.2	414	2.8
45 to 59 Years	25.3	1.46	11.84	57.6	468	2.8
60 Years and Over	28.1	1.66	13.23	59.0	471	3.2
Race of Householder						
White	77.6	4.21	34.22	54.3	441	1.8
Black	12.5	0.68	5.45	54.1	435	6.6
Other ³	9.6	0.29	2.35	30.3	245	6.6
Householder of Hispanic Descent						
Yes	9.0	0.27	2.21	29.8	246	7.0
No	90.7	4.91	39.81	54.1	439	1.8

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Below 150 percent of poverty line or 60 percent of median State income.

³ Includes 5.1 million householders who described themselves as Hispanic rather than White, Black, or other.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE2-6u. Space-Heating Energy Consumption and Expenditures in U.S. Households by Usage Indicators, 1997

Usage Indicators	Space-Heating Energy					RSE Row Factors
	Households (million)	Total		Per Household		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	
	RSE Column Factor:	1.0	1.3	1.2	0.9	
Total Households Using a Major Space-Heating Fuel¹	99.7	5.18	42.03	52.0	421	1.8
1997 Heating Degree-Days (HDD)						
Less than 4,000	42.0	1.00	10.29	23.9	245	5.8
4,000 to 5,499	21.2	1.24	10.79	58.6	509	7.1
5,500 to 6,999	25.9	2.06	15.26	79.6	588	4.8
7,000 or More	10.5	0.87	5.68	82.4	539	10.0
Estimated Heated Floorspace Category (square feet)²						
Fewer than 600	7.6	0.23	2.02	30.8	268	6.6
600 to 999	21.0	0.84	6.97	39.7	332	4.1
1,000 to 1,599	29.8	1.49	12.12	49.9	406	3.5
1,600 to 1,999	15.1	0.91	7.36	59.9	487	3.8
2,000 to 2,399	7.8	0.49	3.92	63.3	502	5.2
2,400 to 2,999	5.3	0.36	2.88	67.8	546	6.5
3,000 or More	4.1	0.35	2.64	85.3	645	9.1
No Estimate Provided	9.0	0.52	4.11	57.4	456	6.3
Household Size						
1 Person	25.1	1.13	9.44	45.2	376	3.3
2 Persons	32.6	1.77	14.42	54.4	442	2.6
3 Persons	17.0	0.91	7.38	53.5	434	3.4
4 Persons	15.0	0.81	6.51	54.0	433	3.8
5 Persons	6.2	0.34	2.67	55.2	429	6.1
6 or More Persons	3.7	0.21	1.60	55.0	429	9.2
Weekday Home Activities						
Home Used for Business						
Yes	7.2	0.42	3.31	58.0	462	7.0
No	92.6	4.76	38.71	51.5	418	1.7
Energy-Intensive Activity						
Yes	2.4	0.14	1.07	57.8	455	10.7
No	97.4	5.04	40.95	51.8	421	1.7
Someone Home All Day						
Yes	50.3	2.80	22.44	55.7	446	2.3
No	49.5	2.38	19.59	48.2	396	2.5
Winter Temperature Settings						
Lower When No One Home						
Yes	45.0	2.27	18.48	50.5	410	2.5
No	54.7	2.91	23.54	53.1	430	2.1
Lower During Sleeping Hours						
Yes	47.0	2.43	19.53	51.6	415	2.5
No	52.7	2.76	22.50	52.3	427	2.0
Adequacy of Insulation						
Well Insulated	37.5	1.83	15.29	48.8	408	2.7
Adequately Insulated	43.8	2.29	18.45	52.3	421	2.4
Poorly Insulated	18.0	1.04	8.15	57.5	452	4.1

See footnotes at end of table.

Table CE2-6u. Space-Heating Energy Consumption and Expenditures in U.S. Households by Usage Indicators, 1997 (Continued)

Usage Indicators	Space-Heating Energy					RSE Row Factors
	Households (million)	Total		Per Household		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	
	RSE Column Factor:	1.0	1.3	1.2	0.9	
Secondary Heating Fuel (more than one may apply)						
No	65.6	3.17	25.35	48.4	387	2.2
Yes	34.2	2.01	16.68	58.8	488	3.3
Electricity	15.7	0.93	7.68	58.9	489	5.3
Natural Gas	4.9	0.36	2.56	73.5	520	8.0
Kerosene	2.6	0.15	1.41	59.9	552	8.9
Wood	12.9	0.69	5.94	53.6	462	4.9
Other	2.1	0.12	1.16	55.5	562	9.4
Main Heating Equipment						
Central Warm-Air Furnace	56.6	3.31	24.53	58.5	433	2.5
Steam or Hot-Water System	13.4	1.21	9.00	90.1	670	4.8
Heat Pump	9.7	0.13	2.64	13.5	273	7.5
Built-In Electric Units	7.5	0.12	2.43	16.4	327	8.1
Floor, Wall, or Pipeless Furnace	4.8	0.15	1.07	30.9	225	10.0
Room Heater	4.3	0.17	1.38	38.5	317	7.3
Other	4.4	0.09	0.97	20.9	220	7.7
No Main Equipment	0.8	Q	Q	Q	Q	18.4
Age of Main Heating Equipment						
Less than 2 Years	8.7	0.43	3.62	49.7	417	5.2
2 to 4 Years	12.1	0.64	5.21	52.4	429	4.6
5 to 9 Years	19.9	0.93	7.87	46.8	396	3.9
10 to 19 Years	25.0	1.17	9.89	46.9	395	3.3
20 Years or More	26.0	1.63	12.48	62.8	480	3.3
Don't Know	9.0	0.38	2.96	42.0	330	7.7
No Main Equipment	0.8	Q	Q	Q	Q	18.4
Amount of Heat Provided by Main Heating Equipment						
All or Almost All	93.3	4.84	38.91	51.9	417	1.8
About Three-Fourths	4.2	0.22	2.01	52.2	476	7.2
Closer to One-Half	3.2	0.12	1.11	36.1	344	9.2
No Main Equipment	0.8	Q	Q	Q	Q	18.4
Average Electricity Cost for Main Space-Heating (cents per kWh)						
Less than 6	5.1	0.12	1.80	24.2	354	7.3
6 to Less than 9	18.0	0.24	4.86	13.1	270	6.3
9 or More	6.5	0.06	1.66	8.9	256	12.3
Average Natural Gas Cost for Main Space-Heating (dollars per 1000 cf)						
Less than 4.50	1.2	0.13	0.51	107.5	414	15.2
4.50 to Less than 6	13.2	1.06	5.63	80.3	428	6.5
6 or More	39.1	2.41	18.15	61.8	465	4.2

See footnotes at end of table.

Table CE2-6u. Space-Heating Energy Consumption and Expenditures in U.S. Households by Usage Indicators, 1997 (Continued)

Usage Indicators	Space-Heating Energy					RSE Row Factors
	Households (million)	Total		Per Household		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	
	RSE Column Factor:	1.0	1.3	1.2	0.9	
Average Fuel Oil Cost for Main Space-Heating (dollars per gallon)						
Less than .95	3.3	0.24	1.45	73.1	442	8.8
.95 to Less than 1.10	4.7	0.47	3.49	100.1	740	7.5
1.10 or More	1.3	0.13	1.14	102.1	898	17.9
Average LPG Cost for Main Space-Heating (dollars per gallon)						
Less than .75	0.4	0.03	0.22	75.0	540	12.6
.75 to Less than 1.00	1.8	0.12	1.20	64.9	653	10.7
1.00 or More	2.3	0.10	1.26	44.1	553	12.2
Main Space-Heating Fuel Paid by Household						
All Major Fuels¹						
Yes	86.8	4.71	38.51	54.3	444	1.9
No	11.3	0.44	3.24	39.0	286	5.7
Electricity						
Yes	27.4	0.40	7.99	14.7	292	4.5
No	2.2	0.01	0.33	6.5	151	16.0
Natural Gas						
Yes	46.9	3.30	22.19	70.3	473	3.0
No	6.5	0.30	2.10	46.1	321	7.1
Fuel Oil						
Yes	7.2	0.73	5.41	101.3	752	7.0
No	2.3	0.11	0.68	49.8	299	11.5
LPG						
Yes	4.5	0.24	2.62	54.9	587	7.5
No	0.1	0.01	0.07	44.1	506	21.8
Kerosene						
Yes	0.9	0.04	0.34	42.6	366	15.6
No	Q	Q	Q	Q	Q	NF

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Estimates provided by the household interview respondents, who were asked which category best described the total heated floorspace in the home.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE2-7c. Space-Heating Energy Consumption in U.S. Households by Four Most Populated States, 1997

	Four Most Populated States					RSE Row Factors
	Total U.S.	New York	California	Texas	Florida	
Million Households						
Total U.S. Households	101.5	6.8	11.5	7.0	5.9	NF
No Space Heating	0.8	Q	Q	Q	Q	55.0
Space Heating	100.7	6.8	11.4	6.9	5.7	1.0
Not Using a Major Fuel ¹	1.0	Q	0.1	Q	Q	45.2
Using a Major Fuel ¹	99.7	6.7	11.2	6.9	5.7	1.0
For Main Space Heating	98.1	6.6	11.0	6.9	5.7	1.0
For Secondary Space Heating Only	1.6	Q	0.2	Q	Q	32.3
Number of Households with Space Heating, Major Fuels Used (more than one may apply):						
Electricity	42.0	1.3	4.1	3.8	4.8	7.0
Natural Gas	54.5	3.4	7.9	3.9	0.8	7.5
Fuel Oil	9.8	2.8	Q	Q	Q	18.9
Kerosene	3.5	Q	Q	Q	Q	26.4
LPG	5.6	Q	0.2	0.3	Q	27.4
Quadrillion Btu						
Space-Heating Btu Consumption, Major Fuels Used:						
Electricity	0.40	0.01	0.02	0.03	0.01	14.4
Natural Gas	3.61	0.27	0.19	0.17	0.01	12.7
Fuel Oil	0.85	0.23	Q	Q	Q	27.0
Kerosene	0.06	Q	Q	Q	Q	50.3
LPG	0.26	Q	0.01	0.01	Q	29.9
Total	5.18	0.52	0.22	0.21	0.03	8.7
Physical Units						
Physical Units of Space-Heating Consumption, Major Fuels Used:						
Electricity (billion kWh)	118	2	5	9	4	14.4
Natural Gas (billion cf)	3,517	267	184	167	8	12.7
Fuel Oil (million gallons)	6,133	1,640	Q	Q	Q	27.0
Kerosene (million gallons)	436	Q	Q	Q	Q	50.3
LPG (million gallons)	2,823	Q	81	94	Q	29.9
Million Btu per Household						
Average Space-Heating Btu Consumption per Household						
Using a Major Fuel ¹	52.0	76.9	19.5	30.5	4.6	8.8
For Main Space Heating	52.5	77.3	19.7	30.6	4.6	8.9
For Secondary Space Heating Only	17.6	Q	Q	Q	Q	51.3

See footnotes at end of table.

Table CE2-7c. Space-Heating Energy Consumption in U.S. Households by Four Most Populated States, 1997 (Continued)

	Four Most Populated States				RSE Row Factors	
	Total U.S.	New York	California	Texas		Florida
RSE Column Factor:	0.3	1.2	0.8	1.4	2.2	
Million Households						
Number of Households, Where the Main Space-Heating Fuel Is:						
Electricity	29.6	0.4	2.9	2.9	4.7	10.7
Natural Gas	53.5	3.4	7.8	3.8	0.7	8.6
Fuel Oil	9.5	2.7	Q	Q	Q	18.1
Kerosene	1.0	Q	Q	Q	Q	49.5
LPG	4.6	Q	0.2	0.3	Q	28.7
Other	2.6	0.2	0.3	Q	Q	27.4
No Space Heating	0.8	Q	Q	Q	Q	55.0
Million Btu per Household³						
Space-Heating Btu Consumption per Household,² Where the Main Space-Heating Fuel Is:						
Electricity	12.8	14.0	4.8	10.1	2.7	14.7
Natural Gas	66.9	80.7	23.8	44.7	11.3	6.4
Fuel Oil	88.1	81.5	Q	Q	Q	11.9
Kerosene	41.5	Q	Q	Q	Q	31.4
LPG	53.4	Q	33.0	32.1	Q	15.0
Physical Units (PU) per Household³						
Physical Units of Space-Heating Consumption per Household,² Where the Main Space-Heating Fuel Is:						
Electricity (kWh)	3,760	4,103	1,414	2,963	798	14.7
Natural Gas (thousand cf)	65	79	23	44	11	6.4
Fuel Oil (gallons)	636	588	Q	Q	Q	11.9
Kerosene (gallons)	307	Q	Q	Q	Q	31.4
LPG (gallons)	585	Q	361	352	Q	15.0
1997 Heating Degree-Days (HDD) per Household³						
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:						
Electricity	3,225	6,058	1,853	2,167	457	9.0
Natural Gas	4,710	5,976	1,775	2,589	760	7.9
Fuel Oil	5,707	5,003	Q	Q	Q	5.0
Kerosene	4,959	Q	Q	Q	Q	26.1
LPG	4,863	Q	3,415	2,810	Q	12.9
Average for All Households	4,368	5,579	1,870	2,422	503	5.2

See footnotes at end of table.

Table CE2-7c. Space-Heating Energy Consumption in U.S. Households by Four Most Populated States, 1997 (Continued)

	Total U.S.	Four Most Populated States				RSE Row Factors
		New York	California	Texas	Florida	
RSE Column Factor:	0.3	1.2	0.8	1.4	2.2	
Heated Square Footage (HSF) per Household³						
Heated Square Footage per Household,⁴ Where the Main Space-Heating Fuel Is:						
Electricity	1,468	1,199	1,235	1,355	1,567	5.4
Natural Gas	1,757	1,799	1,438	1,608	1,906	5.4
Fuel Oil	1,844	1,496	Q	Q	Q	6.7
Kerosene	1,023	Q	Q	Q	Q	12.1
LPG	1,676	Q	1,253	1,344	Q	7.0
Average for All Households	1,667	1,628	1,381	1,492	1,597	3.3
Space-Heating Intensity [PU÷(HDD×(HSF÷1000))]³						
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:						
Electricity (kWh)	0.794	0.565	0.618	1.009	1.114	7.1
Natural Gas (cubic feet)	7.876	7.311	9.095	10.458	7.587	4.5
Fuel Oil (gallons)	0.060	0.079	Q	Q	Q	11.1
Kerosene (gallons)	0.061	Q	Q	Q	Q	25.5
LPG (gallons)	0.072	Q	0.084	0.093	Q	14.9

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the space-heating consumption of the space-heating fuel. Not included are: 1) the consumption of the main space-heating fuel for uses other than space heating; 2) the consumption of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the consumption of other fuels that are used as secondary space-heating fuels.

³ Averages are for those households using each of the main space-heating fuels.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE2-8c. Space-Heating Energy Consumption in U.S. Households by Urban/Rural Location, 1997

	Urban/Rural Location ¹					RSE Row Factors
	Total	City	Town	Suburbs	Rural	
	0.6	1.0	1.2	1.3	1.0	
Million Households						
Total U.S. Households	101.5	48.2	18.2	18.6	16.5	4.2
No Space Heating	0.8	0.5	Q	0.2	Q	22.3
Space Heating	100.7	47.7	18.2	18.4	16.4	4.2
Not Using a Major Fuel ²	1.0	0.3	0.1	Q	0.5	27.7
Using a Major Fuel ²	99.7	47.4	18.0	18.4	15.9	4.2
For Main Space Heating	98.1	47.2	17.8	18.3	14.8	4.2
For Secondary Space Heating Only	1.6	0.2	0.2	Q	1.1	19.9
Number of Households with Space Heating, Major Fuels Used (more than one may apply):						
Electricity	42.0	18.7	7.5	8.1	7.7	5.5
Natural Gas	54.5	30.3	9.6	11.2	3.5	6.2
Fuel Oil	9.8	3.2	2.3	1.6	2.8	11.6
Kerosene	3.5	1.0	0.6	0.5	1.4	16.1
LPG	5.6	0.5	1.0	0.3	3.8	17.8
Quadrillion Btu						
Space-Heating Btu Consumption, Major Fuels Used:						
Electricity	0.40	0.14	0.08	0.08	0.10	8.5
Natural Gas	3.61	1.93	0.68	0.75	0.26	7.6
Fuel Oil	0.85	0.22	0.21	0.15	0.27	13.7
Kerosene	0.06	0.01	0.02	(*)	0.03	25.1
LPG	0.26	0.02	0.05	0.01	0.18	20.1
Total	5.18	2.31	1.04	0.99	0.84	5.0
Physical Units						
Physical Units of Space-Heating Consumption, Major Fuels Used:						
Electricity (billion kWh)	118	41	24	24	30	8.5
Natural Gas (billion cf)	3,517	1,875	663	729	250	7.6
Fuel Oil (million gallons)	6,133	1,605	1,516	1,060	1,952	13.7
Kerosene (million gallons)	436	79	113	24	220	25.1
LPG (million gallons)	2,823	174	584	121	1,944	20.1
Million Btu per Household						
Average Space-Heating Btu Consumption per Household						
Using a Major Fuel ²	52.0	48.8	57.7	53.9	52.8	3.7
For Main Space Heating	52.5	48.9	58.1	54.1	55.4	3.7
For Secondary Space Heating Only	17.6	18.6	18.3	Q	17.8	25.8

See footnotes at end of table.

Table CE2-8c. Space-Heating Energy Consumption in U.S. Households by Urban/Rural Location, 1997 (Continued)

	Urban/Rural Location ¹					RSE Row Factors
	Total	City	Town	Suburbs	Rural	
	0.6	1.0	1.2	1.3	1.0	
Million Households						
Number of Households, Where the Main Space-Heating Fuel Is:						
Electricity	29.6	13.9	5.0	5.5	5.2	7.2
Natural Gas	53.5	29.7	9.5	11.0	3.3	6.2
Fuel Oil	9.5	3.1	2.3	1.5	2.6	11.6
Kerosene	1.0	0.2	0.2	Q	0.6	26.7
LPG	4.6	0.4	0.9	0.2	3.1	19.1
Other	2.6	0.5	0.3	Q	1.6	18.2
No Space Heating	0.8	0.5	Q	0.2	Q	22.3
Million Btu per Household⁴						
Space-Heating Btu Consumption per Household,³ Where the Main Space-Heating Fuel Is:						
Electricity	12.8	9.4	15.2	14.1	18.4	5.2
Natural Gas	66.9	64.2	71.6	67.5	76.3	3.8
Fuel Oil	88.1	70.8	91.3	95.9	101.5	5.3
Kerosene	41.5	34.2	54.3	Q	40.9	17.6
LPG	53.4	40.4	58.1	48.7	53.9	8.2
Physical Units (PU) per Household⁴						
Physical Units of Space-Heating Consumption per Household,³ Where the Main Space-Heating Fuel Is:						
Electricity (kWh)	3,760	2,752	4,460	4,131	5,394	5.2
Natural Gas (thousand cf)	65	63	70	66	74	3.8
Fuel Oil (gallons)	636	511	659	692	732	5.3
Kerosene (gallons)	307	253	402	Q	303	17.6
LPG (gallons)	585	443	636	534	591	8.2
1997 Heating Degree-Days (HDD) per Household⁴						
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:						
Electricity	3,225	2,756	4,075	3,104	3,799	4.5
Natural Gas	4,710	4,475	5,083	4,976	4,857	3.1
Fuel Oil	5,707	5,402	6,204	5,103	5,993	3.6
Kerosene	4,959	3,301	5,921	Q	5,230	11.6
LPG	4,863	4,247	5,691	3,659	4,777	9.3
Average for All Households	4,368	4,023	4,986	4,405	4,678	2.2

See footnotes at end of table.

Table CE2-8c. Space-Heating Energy Consumption in U.S. Households by Urban/Rural Location, 1997 (Continued)

	Total	Urban/Rural Location ¹				RSE Row Factors
		City	Town	Suburbs	Rural	
RSE Column Factor:	0.6	1.0	1.2	1.3	1.0	
Heated Square Footage (HSF) per Household⁴						
Heated Square Footage per Household,⁵ Where the Main Space-Heating Fuel Is:						
Electricity	1,468	1,276	1,408	1,755	1,738	2.8
Natural Gas	1,757	1,597	1,801	2,087	1,965	2.8
Fuel Oil	1,844	1,345	1,851	2,390	2,116	3.6
Kerosene	1,023	943	1,043	Q	1,032	7.0
LPG	1,676	1,362	1,529	2,194	1,720	8.0
Average for All Households	1,667	1,482	1,675	2,011	1,824	1.9
Space-Heating Intensity [PU÷(HDD×(HSF÷1000))]⁴						
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:						
Electricity (kWh)	0.794	0.783	0.777	0.759	0.817	4.0
Natural Gas (cubic feet)	7.876	8.747	7.614	6.327	7.785	3.1
Fuel Oil (gallons)	0.060	0.070	0.057	0.057	0.058	5.9
Kerosene (gallons)	0.061	0.081	0.065	Q	0.056	15.2
LPG (gallons)	0.072	0.077	0.073	0.066	0.072	10.3

¹ Based on the household respondent's description rather than the Federal Government definition.

² The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

³ Includes only the space-heating consumption of the space-heating fuel. Not included are: 1) the consumption of the main space-heating fuel for uses other than space heating; 2) the consumption of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the consumption of other fuels that are used as secondary space-heating fuels.

⁴ Averages are for those households using each of the main space-heating fuels.

⁵ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

(*) = Value rounds to zero in the units displayed.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE2-9c. Space-Heating Energy Consumption in U.S. Households by Northeast Census Region, 1997

	Northeast Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Middle Atlantic	New England	
RSE Column Factor:	0.6	1.0	1.2	1.4	
Million Households					
Total U.S. Households	101.5	19.7	14.4	5.3	NF
No Space Heating	0.8	Q	Q	Q	33.6
Space Heating	100.7	19.7	14.4	5.3	NF
Not Using a Major Fuel ¹	1.0	0.2	Q	Q	29.2
Using a Major Fuel ¹	99.7	19.5	14.3	5.2	NF
For Main Space Heating	98.1	19.2	14.1	5.1	0.9
For Secondary Space Heating Only	1.6	0.3	0.2	0.1	25.6
Number of Households with Space Heating, Major Fuels Used (more than one may apply):					
Electricity	42.0	5.0	3.8	1.2	7.3
Natural Gas	54.5	9.2	7.7	1.5	9.5
Fuel Oil	9.8	7.3	4.5	2.8	10.1
Kerosene	3.5	0.9	0.6	0.3	19.9
LPG	5.6	0.4	0.2	0.1	27.6
Quadrillion Btu					
Space-Heating Btu Consumption, Major Fuels Used:					
Electricity	0.40	0.05	0.03	0.01	11.5
Natural Gas	3.61	0.74	0.62	0.12	9.5
Fuel Oil	0.85	0.65	0.38	0.27	12.8
Kerosene	0.06	0.03	0.01	0.01	31.0
LPG	0.26	0.01	Q	0.01	29.2
Total	5.18	1.48	1.06	0.43	3.2
Physical Units					
Physical Units of Space-Heating Consumption, Major Fuels Used:					
Electricity (billion kWh)	118	14	10	4	11.5
Natural Gas (billion cf)	3,517	720	602	118	9.5
Fuel Oil (million gallons)	6,133	4,722	2,741	1,981	12.8
Kerosene (million gallons)	436	213	104	109	31.0
LPG (million gallons)	2,823	159	Q	58	29.2
Million Btu per Household					
Average Space-Heating Btu Consumption per Household					
Using a Major Fuel ¹	52.0	76.0	73.8	82.0	3.3
For Main Space Heating	52.5	76.7	74.4	82.9	3.3
For Secondary Space Heating Only	17.6	35.6	32.6	41.3	24.8

See footnotes at end of table.

Table CE2-9c. Space-Heating Energy Consumption in U.S. Households by Northeast Census Region, 1997 (Continued)

	Northeast Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Middle Atlantic	New England	
RSE Column Factor:	0.6	1.0	1.2	1.4	
Million Households					
Number of Households, Where the Main Space-Heating Fuel Is:					
Electricity	29.6	2.3	1.7	0.6	12.3
Natural Gas	53.5	9.2	7.7	1.5	9.5
Fuel Oil	9.5	7.1	4.4	2.7	10.1
Kerosene	1.0	0.4	0.2	Q	31.2
LPG	4.6	0.2	Q	Q	28.0
Other	2.6	0.5	0.3	0.2	22.8
No Space Heating	0.8	Q	Q	Q	33.6
Million Btu per Household³					
Space-Heating Btu Consumption per Household,² Where the Main Space-Heating Fuel Is:					
Electricity	12.8	18.0	18.1	18.0	6.2
Natural Gas	66.9	80.7	80.2	83.2	3.3
Fuel Oil	88.1	90.7	85.4	99.3	5.1
Kerosene	41.5	56.0	52.5	59.5	14.3
LPG	53.4	58.1	Q	Q	10.3
Physical Units (PU) per Household³					
Physical Units of Space-Heating Consumption per Household,² Where the Main Space-Heating Fuel Is:					
Electricity (kWh)	3,760	5,284	5,291	5,265	6.2
Natural Gas (thousand cf)	65	79	78	81	3.3
Fuel Oil (gallons)	636	654	616	716	5.1
Kerosene (gallons)	307	415	389	441	14.3
LPG (gallons)	585	636	Q	Q	10.3
1997 Heating Degree-Days (HDD) per Household³					
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:					
Electricity	3,225	5,812	5,729	6,028	2.2
Natural Gas	4,710	5,801	5,773	5,954	1.7
Fuel Oil	5,707	5,753	5,162	6,696	3.1
Kerosene	4,959	6,647	5,739	7,557	8.3
LPG	4,863	6,457	Q	Q	7.1
Average for All Households	4,368	5,811	5,579	6,449	2.1

See footnotes at end of table.

Table CE2-9c. Space-Heating Energy Consumption in U.S. Households by Northeast Census Region, 1997 (Continued)

	Northeast Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Middle Atlantic	New England	
RSE Column Factor:	0.6	1.0	1.2	1.4	
Heated Square Footage (HSF) per Household³					
Heated Square Footage per Household,⁴ Where the Main Space-Heating Fuel Is:					
Electricity	1,468	1,516	1,541	1,451	6.8
Natural Gas	1,757	1,800	1,817	1,706	4.1
Fuel Oil	1,844	1,801	1,731	1,914	3.0
Kerosene	1,023	1,103	1,049	1,157	6.3
LPG	1,676	1,590	Q	Q	8.2
Average for All Households	1,667	1,748	1,745	1,757	2.3
Space-Heating Intensity [PU÷{HDD×(HSF÷1000)}]³					
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:					
Electricity (kWh)	0.794	0.600	0.599	0.602	4.6
Natural Gas (cubic feet)	7.876	7.527	7.447	7.974	2.9
Fuel Oil (gallons)	0.060	0.063	0.069	0.056	5.7
Kerosene (gallons)	0.061	0.057	0.065	0.050	14.0
LPG (gallons)	0.072	0.062	Q	Q	14.2

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the space-heating consumption of the space-heating fuel. Not included are: 1) the consumption of the main space-heating fuel for uses other than space heating; 2) the consumption of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the consumption of other fuels that are used as secondary space-heating fuels.

³ Averages are for those households using each of the main space-heating fuels.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE2-10c. Space-Heating Energy Consumption in U.S. Households
by Midwest Census Region, 1997**

	Midwest Census Region				RSE Row Factors
	Total U.S.	Census Division			
		Total	East North Central	West North Central	
			0.5	1.0	
RSE Column Factor:					
Million Households					
Total U.S. Households	101.5	24.1	16.9	7.2	NF
No Space Heating	0.8	Q	Q	Q	34.4
Space Heating	100.7	24.1	16.9	7.2	NF
Not Using a Major Fuel ¹	1.0	0.3	Q	Q	40.3
Using a Major Fuel ¹	99.7	23.8	16.8	7.0	0.6
For Main Space Heating	98.1	23.5	16.6	6.8	1.5
For Secondary Space Heating Only	1.6	0.3	Q	Q	28.6
Number of Households with Space Heating, Major Fuels Used (more than one may apply):					
Electricity	42.0	6.2	4.2	2.0	7.2
Natural Gas	54.5	18.1	13.3	4.8	5.3
Fuel Oil	9.8	1.1	0.6	0.4	17.5
Kerosene	3.5	0.4	0.4	Q	16.8
LPG	5.6	2.0	1.0	1.0	20.2
Quadrillion Btu					
Space-Heating Btu Consumption, Major Fuels Used:					
Electricity	0.40	0.06	0.04	0.02	17.2
Natural Gas	3.61	1.66	1.26	0.40	6.8
Fuel Oil	0.85	0.10	0.06	0.04	19.9
Kerosene	0.06	Q	Q	Q	31.5
LPG	0.26	0.13	0.08	0.06	19.3
Total	5.18	1.96	1.44	0.52	4.0
Physical Units					
Physical Units of Space-Heating Consumption, Major Fuels Used:					
Electricity (billion kWh)	118	18	11	6	17.2
Natural Gas (billion cf)	3,517	1,615	1,226	389	6.8
Fuel Oil (million gallons)	6,133	734	453	282	19.9
Kerosene (million gallons)	436	Q	Q	Q	31.5
LPG (million gallons)	2,823	1,458	828	630	19.3
Million Btu per Household					
Average Space-Heating Btu Consumption per Household					
Using a Major Fuel ¹	52.0	82.3	85.8	73.7	4.0
For Main Space Heating	52.5	83.1	86.2	75.6	3.9
For Secondary Space Heating Only	17.6	20.7	Q	Q	36.5

See footnotes at end of table.

Table CE2-10c. Space-Heating Energy Consumption in U.S. Households by Midwest Census Region, 1997 (Continued)

	Midwest Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			East North Central	West North Central	
	0.5	1.0	1.1	1.6	
RSE Column Factor:					
Million Households					
Number of Households, Where the Main Space-Heating Fuel Is:					
Electricity	29.6	2.7	1.9	0.8	15.6
Natural Gas	53.5	17.9	13.2	4.7	5.4
Fuel Oil	9.5	1.0	0.6	0.4	17.1
Kerosene	1.0	Q	Q	Q	31.0
LPG	4.6	1.8	0.9	0.9	21.8
Other	2.6	0.6	0.3	Q	31.4
No Space Heating	0.8	Q	Q	Q	34.4
Million Btu per Household³					
Space-Heating Btu Consumption per Household,² Where the Main Space-Heating Fuel Is:					
Electricity	12.8	20.3	18.5	24.3	6.9
Natural Gas	66.9	92.0	94.9	83.9	2.8
Fuel Oil	88.1	96.5	96.9	96.1	4.6
Kerosene	41.5	Q	Q	Q	19.7
LPG	53.4	72.7	79.3	65.6	6.4
Physical Units (PU) per Household³					
Physical Units of Space-Heating Consumption per Household,² Where the Main Space-Heating Fuel Is:					
Electricity (kWh)	3,760	5,941	5,415	7,116	6.9
Natural Gas (thousand cf)	65	90	92	82	2.8
Fuel Oil (gallons)	636	698	700	696	4.6
Kerosene (gallons)	307	Q	Q	Q	19.7
LPG (gallons)	585	796	869	718	6.4
1997 Heating Degree-Days (HDD) per Household³					
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:					
Electricity	3,225	6,120	6,302	5,712	3.1
Natural Gas	4,710	6,596	6,586	6,624	2.1
Fuel Oil	5,707	7,484	7,153	8,002	3.0
Kerosene	4,959	Q	Q	Q	16.3
LPG	4,863	6,747	6,561	6,949	4.1
Average for All Households	4,368	6,592	6,574	6,635	1.9

See footnotes at end of table.

Table CE2-10c. Space-Heating Energy Consumption in U.S. Households by Midwest Census Region, 1997 (Continued)

	Midwest Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			East North Central	West North Central	
	0.5	1.0	1.1	1.6	
RSE Column Factor:					
Heated Square Footage (HSF) per Household³					
Heated Square Footage per Household,⁴ Where the Main Space-Heating Fuel Is:					
Electricity	1,468	1,519	1,288	2,033	6.5
Natural Gas	1,757	1,973	1,951	2,033	3.2
Fuel Oil	1,844	2,057	2,004	2,140	3.9
Kerosene	1,023	Q	Q	Q	7.6
LPG	1,676	1,926	2,028	1,816	6.4
Average for All Households	1,667	1,919	1,881	2,012	2.1
Space-Heating Intensity [PU÷{HDD×(HSF÷1000)}]³					
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:					
Electricity (kWh)	0.794	0.639	0.667	0.613	5.7
Natural Gas (cubic feet)	7.876	6.885	7.193	6.067	3.3
Fuel Oil (gallons)	0.060	0.045	0.049	0.041	5.5
Kerosene (gallons)	0.061	Q	Q	Q	16.0
LPG (gallons)	0.072	0.061	0.065	0.057	10.4

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the space-heating consumption of the space-heating fuel. Not included are: 1) the consumption of the main space-heating fuel for uses other than space heating; 2) the consumption of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the consumption of other fuels that are used as secondary space-heating fuels.

³ Averages are for those households using each of the main space-heating fuels.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE2-11c. Space-Heating Energy Consumption in U.S. Households
by South Census Region, 1997**

	South Census Region					RSE Row Factors
	Total U.S.	Census Division				
		Total	South Atlantic	East South Central	West south Central	
RSE Column Factor:						
Million Households						
Total U.S. Households	101.5	35.9	18.7	6.3	10.8	NF
No Space Heating	0.8	0.3	Q	Q	Q	44.3
Space Heating	100.7	35.6	18.5	6.3	10.8	NF
Not Using a Major Fuel ¹	1.0	0.2	Q	Q	Q	39.7
Using a Major Fuel ¹	99.7	35.4	18.3	6.3	10.8	NF
For Main Space Heating	98.1	34.8	18.0	6.1	10.7	NF
For Secondary Space Heating Only	1.6	0.6	0.3	0.2	Q	20.4
Number of Households with Space Heating, Major Fuels Used (more than one may apply):						
Electricity	42.0	21.3	12.0	3.8	5.6	4.8
Natural Gas	54.5	14.4	5.7	2.4	6.3	7.3
Fuel Oil	9.8	1.1	1.1	Q	Q	28.3
Kerosene	3.5	1.9	1.3	0.4	Q	15.7
LPG	5.6	2.6	1.2	1.0	0.4	17.4
Quadrillion Btu						
Space-Heating Btu Consumption, Major Fuels Used:						
Electricity	0.40	0.21	0.10	0.05	0.05	9.8
Natural Gas	3.61	0.71	0.28	0.13	0.29	11.9
Fuel Oil	0.85	0.07	0.07	Q	Q	29.6
Kerosene	0.06	0.02	0.02	(*)	Q	23.5
LPG	0.26	0.08	0.04	0.03	0.01	22.2
Total	5.18	1.09	0.51	0.22	0.36	7.1
Physical Units						
Physical Units of Space-Heating Consumption, Major Fuels Used:						
Electricity (billion kWh)	118	60	30	16	14	9.8
Natural Gas (billion cf)	3,517	687	277	124	286	11.9
Fuel Oil (million gallons)	6,133	526	508	Q	Q	29.6
Kerosene (million gallons)	436	161	126	33	Q	23.5
LPG (million gallons)	2,823	921	429	352	140	22.2
Million Btu per Household						
Average Space-Heating Btu Consumption per Household						
Using a Major Fuel ¹	52.0	30.8	28.1	35.0	33.0	7.2
For Main Space Heating	52.5	31.2	28.3	35.8	33.3	7.2
For Secondary Space Heating Only	17.6	9.6	14.3	5.4	Q	30.7

See footnotes at end of table.

Table CE2-11c. Space-Heating Energy Consumption in U.S. Households by South Census Region, 1997 (Continued)

	South Census Region					RSE Row Factors
	Total U.S.	Census Division			West south Central	
		Total	South Atlantic	East South Central		
RSE Column Factor:	0.5	0.9	1.2	1.4	1.5	
Million Households						
Number of Households, Where the Main Space-Heating Fuel Is:						
Electricity	29.6	17.5	10.4	2.9	4.2	7.2
Natural Gas	53.5	13.7	5.4	2.3	6.1	7.5
Fuel Oil	9.5	1.1	1.1	Q	Q	27.5
Kerosene	1.0	0.4	0.4	Q	Q	20.8
LPG	4.6	2.1	0.8	0.8	0.4	18.1
Other	2.6	0.8	0.5	0.2	Q	19.9
No Space Heating	0.8	0.3	Q	Q	Q	44.3
Million Btu per Household³						
Space-Heating Btu Consumption per Household,² Where the Main Space-Heating Fuel Is:						
Electricity	12.8	11.3	9.7	17.8	11.0	6.3
Natural Gas	66.9	50.1	51.9	54.1	47.1	6.7
Fuel Oil	88.1	64.9	64.0	Q	Q	6.5
Kerosene	41.5	25.7	22.6	Q	Q	18.7
LPG	53.4	38.2	44.0	35.5	31.9	9.6
Physical Units (PU) per Household³						
Physical Units of Space-Heating Consumption per Household,² Where the Main Space-Heating Fuel Is:						
Electricity (kWh)	3,760	3,319	2,829	5,207	3,221	6.3
Natural Gas (thousand cf)	65	49	51	53	46	6.7
Fuel Oil (gallons)	636	469	462	Q	Q	6.5
Kerosene (gallons)	307	190	167	Q	Q	18.7
LPG (gallons)	585	418	481	388	350	9.6
1997 Heating Degree-Days (HDD) per Household³						
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:						
Electricity	3,225	2,382	2,110	3,403	2,346	6.3
Natural Gas	4,710	2,970	3,197	3,326	2,637	5.6
Fuel Oil	5,707	3,857	3,844	Q	Q	7.2
Kerosene	4,959	3,010	2,871	Q	Q	10.4
LPG	4,863	2,991	2,832	3,250	2,766	9.5
Average for All Households	4,368	2,705	2,588	3,362	2,527	4.1

See footnotes at end of table.

Table CE2-11c. Space-Heating Energy Consumption in U.S. Households by South Census Region, 1997 (Continued)

	South Census Region					RSE Row Factors
	Total U.S.	Census Division			West south Central	
		Total	South Atlantic	East South Central		
RSE Column Factor:	0.5	0.9	1.2	1.4	1.5	
Heated Square Footage (HSF) per Household³						
Heated Square Footage per Household,⁴ Where the Main Space-Heating Fuel Is:						
Electricity	1,468	1,532	1,586	1,601	1,351	2.5
Natural Gas	1,757	1,627	1,744	1,559	1,550	3.2
Fuel Oil	1,844	1,785	1,786	Q	Q	6.2
Kerosene	1,023	919	920	Q	Q	6.4
LPG	1,676	1,531	1,781	1,404	1,275	5.5
Average for All Households	1,667	1,570	1,640	1,552	1,462	2.1
Space-Heating Intensity [PU÷(HDD×(HSF÷1000))]³						
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:						
Electricity (kWh)	0.794	0.910	0.845	0.956	1.016	4.7
Natural Gas (cubic feet)	7.876	10.100	9.061	10.159	11.219	3.8
Fuel Oil (gallons)	0.060	0.068	0.067	Q	Q	11.3
Kerosene (gallons)	0.061	0.069	0.063	Q	Q	16.4
LPG (gallons)	0.072	0.091	0.095	0.085	0.099	9.1

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the space-heating consumption of the space-heating fuel. Not included are: 1) the consumption of the main space-heating fuel for uses other than space heating; 2) the consumption of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the consumption of other fuels that are used as secondary space-heating fuels.

³ Averages are for those households using each of the main space-heating fuels.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

(*) = Value rounds to zero in the units displayed.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE2-12c. Space-Heating Energy Consumption in U.S. Households by West Census Region, 1997

	Total U.S.	West Census Region			RSE Row Factors
		Total	Census Division		
			Mountain	Pacific	
RSE Column Factor:	0.5	1.1	1.7	1.1	
Million Households					
Total U.S. Households	101.5	21.8	6.2	15.6	NF
No Space Heating	0.8	0.5	Q	0.5	18.4
Space Heating	100.7	21.3	6.2	15.2	NF
Not Using a Major Fuel ¹	1.0	0.3	Q	0.2	28.8
Using a Major Fuel ¹	99.7	21.0	6.1	14.9	NF
For Main Space Heating	98.1	20.6	6.0	14.6	NF
For Secondary Space Heating Only	1.6	0.4	Q	0.3	20.5
Number of Households with Space Heating, Major Fuels Used (more than one may apply):					
Electricity	42.0	9.4	2.5	7.0	5.2
Natural Gas	54.5	12.8	4.0	8.8	3.5
Fuel Oil	9.8	0.3	Q	0.2	25.2
Kerosene	3.5	0.2	Q	Q	20.4
LPG	5.6	0.6	0.3	0.3	21.9
Quadrillion Btu					
Space-Heating Btu Consumption, Major Fuels Used:					
Electricity	0.40	0.09	0.02	0.07	5.6
Natural Gas	3.61	0.51	0.25	0.26	6.7
Fuel Oil	0.85	0.02	Q	0.01	29.9
Kerosene	0.06	(*)	Q	Q	30.4
LPG	0.26	0.03	0.02	0.01	25.1
Total	5.18	0.65	0.29	0.36	4.7
Physical Units					
Physical Units of Space-Heating Consumption, Major Fuels Used:					
Electricity (billion kWh)	118	26	5	21	5.6
Natural Gas (billion cf)	3,517	495	239	256	6.7
Fuel Oil (million gallons)	6,133	151	Q	108	29.9
Kerosene (million gallons)	436	33	Q	Q	30.4
LPG (million gallons)	2,823	285	179	105	25.1
Million Btu per Household					
Average Space-Heating Btu Consumption per Household					
Using a Major Fuel ¹	52.0	30.9	46.9	24.4	4.8
For Main Space Heating	52.5	31.3	47.4	24.7	4.9
For Secondary Space Heating Only	17.6	12.1	Q	9.3	29.7

See footnotes at end of table.

Table CE2-12c. Space-Heating Energy Consumption in U.S. Households by West Census Region, 1997 (Continued)

	West Census Region				RSE Row Factors
	Total U.S.	Census Division			
		Total	Mountain	Pacific	
RSE Column Factor:	0.5	1.1	1.7	1.1	
Million Households					
Number of Households, Where the Main Space-Heating Fuel Is:					
Electricity	29.6	7.1	1.7	5.4	7.0
Natural Gas	53.5	12.7	4.0	8.7	3.6
Fuel Oil	9.5	0.2	Q	Q	23.6
Kerosene	1.0	Q	Q	Q	33.9
LPG	4.6	0.5	0.3	0.3	24.9
Other	2.6	0.7	0.2	0.5	18.9
No Space Heating	0.8	0.5	Q	0.5	18.4
Million Btu per Household³					
Space-Heating Btu Consumption per Household,² Where the Main Space-Heating Fuel Is:					
Electricity	12.8	12.0	10.4	12.5	5.6
Natural Gas	66.9	39.7	60.9	29.9	5.0
Fuel Oil	88.1	82.5	Q	Q	13.6
Kerosene	41.5	Q	Q	Q	21.5
LPG	53.4	46.3	58.0	34.4	7.2
Physical Units (PU) per Household³					
Physical Units of Space-Heating Consumption per Household,² Where the Main Space-Heating Fuel Is:					
Electricity (kWh)	3,760	3,518	3,044	3,662	5.6
Natural Gas (thousand cf)	65	39	59	29	5.0
Fuel Oil (gallons)	636	595	Q	Q	13.6
Kerosene (gallons)	307	Q	Q	Q	21.5
LPG (gallons)	585	507	635	377	7.2
1997 Heating Degree-Days (HDD) per Household³					
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:					
Electricity	3,225	3,354	3,524	3,302	6.2
Natural Gas	4,710	3,136	5,262	2,157	4.5
Fuel Oil	5,707	5,258	Q	Q	7.3
Kerosene	4,959	Q	Q	Q	17.9
LPG	4,863	5,150	6,513	3,768	7.5
Average for All Households	4,368	3,300	4,849	2,664	3.4

See footnotes at end of table.

Table CE2-12c. Space-Heating Energy Consumption in U.S. Households by West Census Region, 1997 (Continued)

	West Census Region				RSE Row Factors
	Total U.S.	Census Division			
		Total	Mountain	Pacific	
RSE Column Factor:	0.5	1.1	1.7	1.1	
Heated Square Footage (HSF) per Household³					
Heated Square Footage per Household,⁴ Where the Main Space-Heating Fuel Is:					
Electricity	1,468	1,277	1,333	1,260	3.2
Natural Gas	1,757	1,560	1,690	1,500	3.7
Fuel Oil	1,844	2,499	Q	Q	6.7
Kerosene	1,023	Q	Q	Q	8.3
LPG	1,676	1,446	1,441	1,452	9.3
Average for All Households	1,667	1,469	1,586	1,421	2.9
Space-Heating Intensity [PU÷{HDD×(HSF÷1000)}]³					
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:					
Electricity (kWh)	0.794	0.822	0.648	0.880	5.2
Natural Gas (cubic feet)	7.876	7.893	6.670	8.987	4.0
Fuel Oil (gallons)	0.060	0.045	Q	Q	11.3
Kerosene (gallons)	0.061	Q	Q	Q	17.5
LPG (gallons)	0.072	0.068	0.068	0.069	14.4

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the space-heating consumption of the space-heating fuel. Not included are: 1) the consumption of the main space-heating fuel for uses other than space heating; 2) the consumption of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the consumption of other fuels that are used as secondary space-heating fuels.

³ Averages are for those households using each of the main space-heating fuels.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

(*) = Value rounds to zero in the units displayed.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

1997 Consumption and Expenditures Tables

Space-Heating Expenditures Tables

(20 pages, 78 kb)

Contents

Pages

CE2-1e. Space-Heating Energy Expenditures in U.S. Households by Climate Zone, 1997	2
CE2-2e. Space-Heating Energy Expenditures in U.S. Households by Year of Construction, 1997	2
CE2-3e. Space-Heating Energy Expenditures in U.S. Households by Household Income, 1997	2
CE2-4e. Space-Heating Energy Expenditures in U.S. Households by Type of Housing Unit, 1997	2
CE2-7e. Space-Heating Energy Expenditures in U.S. Households by Four Most Populated States, 1997	2
CE2-8e. Space-Heating Energy Expenditures in U.S. Households by Urban/Rural Location, 1997	2
CE2-9e. Space-Heating Energy Expenditures in U.S. Households by Northeast Census Region, 1997	2
CE2-10e. Space-Heating Energy Expenditures in U.S. Households by Midwest Census Region, 1997	2
CE2-11e. Space-Heating Energy Expenditures in U.S. Households by South Census Region, 1997	2
CE2-12e. Space-Heating Energy Expenditures in U.S. Households by West Census Region, 1997	2

These data are from the 1997 Residential Energy Consumption Survey (RECS) which provides information on the use of energy in residential housing units in the United States. The RECS is a national statistical survey that collects data for occupied primary housing units. RECS was first conducted in 1978; the sixth and most recent survey was conducted in 1997 RECS. The data were collected from a sample of 5,900 housing units statistically selected to represent the 101.5 million units in the United States. The 1997 data are available for the four Census regions, the nine Census divisions, and for the four most populous States--California, Florida, New York, and Texas.

Data provided here are in the public domain and may be reproduced without permission. Appropriate credit would be appreciated. A suggested citation is "U.S. Department of Energy, Energy Information Administration, *"A Look at Residential Energy Consumption in 1997."*

Electronic Products and Services

Users can view and download selected pages or entire reports, search for information, download data and analysis applications, and find out about new information products and services.

Contact: Robert Latta, Survey Manager (rlatta@eia.doe.gov)

World Wide Web: <http://www.eia.doe.gov/emeu/consumption>

Table CE2-1e. Space-Heating Energy Expenditures in U.S. Households by Climate Zone, 1997

	Climate Zone ¹						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
		0.5	1.3	1.0	1.1		
RSE Column Factor:							
Million Households							
Total U.S. Households	101.5	9.3	28.0	22.5	19.5	22.2	8.3
No Space Heating	0.8	Q	Q	Q	Q	0.6	26.2
Space Heating	100.7	9.3	28.0	22.5	19.4	21.6	8.4
Not Using a Major Fuel ²	1.0	0.3	0.2	0.2	0.1	Q	33.2
Using a Major Fuel ²	99.7	8.9	27.8	22.2	19.2	21.5	8.5
For Main Space Heating	98.1	8.6	27.5	21.9	18.9	21.3	8.4
For Secondary Space Heating Only	1.6	0.3	0.4	0.4	0.4	Q	22.3
Number of Households with Space Heating, Major Fuels Used (more than one may apply):							
Electricity	42.0	2.7	8.0	9.6	8.8	12.9	8.8
Natural Gas	54.5	5.0	18.9	10.1	10.8	9.7	9.5
Fuel Oil	9.8	2.0	3.1	4.3	0.3	Q	17.4
Kerosene	3.5	0.4	0.8	0.9	0.9	0.4	18.9
LPG	5.6	0.7	1.4	1.1	1.4	1.0	27.1
Billion Dollars							
Space-Heating Expenditures, Major Fuels Used:							
Electricity	8.56	0.44	1.98	2.74	1.66	1.74	11.4
Natural Gas	24.11	2.53	10.71	5.78	2.62	2.47	11.6
Fuel Oil	6.07	1.35	2.22	2.37	0.11	Q	20.2
Kerosene	0.50	0.13	0.12	0.09	0.14	0.02	28.1
LPG	2.79	0.35	0.93	0.62	0.60	0.28	28.7
Total	42.03	4.80	15.95	11.60	5.14	4.53	8.1
Dollars per Household							
Average Space-Heating Expenditures per Household							
Using a Major Fuel ²	421	538	573	522	267	211	3.5
For Main Space Heating	425	547	577	529	270	212	3.5
For Secondary Space Heating Only ...	175	283	238	92	142	Q	21.9
Million Households							
Number of Households, Where the Main Space-Heating Fuel Is:							
Electricity	29.6	1.1	4.3	6.8	6.5	10.9	10.5
Natural Gas	53.5	4.9	18.7	9.9	10.6	9.3	9.6
Fuel Oil	9.5	1.9	3.0	4.2	0.2	Q	17.3
Kerosene	1.0	0.2	0.2	0.1	0.3	Q	29.2
LPG	4.6	0.5	1.3	0.8	1.2	0.8	29.3
Other	2.6	0.6	0.6	0.6	0.5	0.3	22.9
No Space Heating	0.8	Q	Q	Q	Q	0.6	26.2

See footnotes at end of table.

Table CE2-1e. Space-Heating Energy Expenditures in U.S. Households by Climate Zone, 1997 (Continued)

	Climate Zone ¹						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factor:	0.5	1.3	1.0	1.1	1.2	1.1	
Dollars per Household⁴							
Space-Heating Expenditures per Household,³ Where the Main Space-Heating Fuel Is:							
Electricity	270	349	422	387	237	149	6.3
Natural Gas	446	513	568	580	241	258	4.3
Fuel Oil	629	700	722	555	449	Q	6.5
Kerosene	350	476	513	392	269	Q	18.5
LPG	567	598	708	711	491	301	9.5
1997 Heating Degree-Days (HDD) per Household⁴							
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:							
Electricity	3,225	7,182	6,012	4,332	2,620	1,406	3.7
Natural Gas	4,710	7,844	6,410	4,839	2,176	2,396	3.4
Fuel Oil	5,707	7,431	6,218	4,843	3,474	Q	3.6
Kerosene	4,959	6,979	6,620	4,461	4,007	Q	8.1
LPG	4,863	7,743	6,673	5,203	3,363	2,069	5.3
Average for All Households	4,368	7,640	6,340	4,694	2,449	1,865	2.4
Heated Square Footage (HSF) per Household⁴							
Heated Square Footage per Household,⁵ Where the Main Space-Heating Fuel Is:							
Electricity	1,468	1,589	1,376	1,618	1,364	1,462	3.8
Natural Gas	1,757	2,034	1,933	1,755	1,511	1,539	3.4
Fuel Oil	1,844	1,995	2,036	1,678	1,227	Q	3.9
Kerosene	1,023	1,202	821	1,093	1,041	Q	6.5
LPG	1,676	1,889	1,931	1,852	1,481	1,255	8.2
Average for All Households	1,667	1,937	1,850	1,698	1,447	1,485	2.3
Space-Heating Intensity [Cents÷(HDD×(HSF÷1000))]⁴							
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:							
Electricity	5.70	3.06	5.11	5.52	6.64	7.23	5.3
Natural Gas	5.39	3.22	4.58	6.82	7.33	6.99	4.2
Fuel Oil	5.98	4.72	5.70	6.83	10.54	Q	6.7
Kerosene	6.89	5.67	9.44	8.04	6.44	Q	18.8
LPG	6.96	4.08	5.49	7.38	9.86	11.58	12.3

¹ One of five climatically distinct areas, determined according to the 30-year average (1961-1990) of the annual heating and cooling degree-days. For this report, the heating or cooling degree-days are a measure of how cold or how hot a location is over a period of one year, relative to a base temperature of 65 degrees Fahrenheit. A household is assigned to a climate zone according to the 30-year average annual degree-days for an appropriate nearby weather station.

² The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

³ Includes only the space-heating expenditures of the space-heating fuel. Not included are: 1) the expenditures of the main space-heating fuel for uses other than space heating; 2) the expenditures of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the expenditures of other fuels that are used as secondary space-heating fuels.

⁴ Averages are for those households using each of the main space-heating fuels.

⁵ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE2-2e. Space-Heating Energy Expenditures in U.S. Households by Year of Construction, 1997

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ¹	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.5	1.2	1.0	1.1	1.1	0.9	
Million Households								
Total U.S. Households	101.5	9.7	17.3	19.6	14.4	12.5	27.9	4.3
No Space Heating	0.8	Q	Q	0.2	Q	Q	0.2	35.5
Space Heating	100.7	9.6	17.3	19.4	14.3	12.4	27.7	4.3
Not Using a Major Fuel ²	1.0	Q	0.2	0.2	0.2	Q	0.3	34.1
Using a Major Fuel ²	99.7	9.6	17.1	19.2	14.1	12.4	27.3	4.3
For Main Space Heating	98.1	9.5	16.8	18.8	13.9	12.3	26.8	4.3
For Secondary Space Heating Only	1.6	Q	0.3	0.4	0.2	0.1	0.5	23.4
Number of Households with Space Heating, Major Fuels Used (more than one may apply):								
Electricity	42.0	4.5	10.9	10.1	5.6	3.9	7.1	6.2
Natural Gas	54.5	4.7	6.5	8.3	8.5	8.3	18.3	6.4
Fuel Oil	9.8	0.3	0.6	1.0	1.5	1.5	4.9	14.8
Kerosene	3.5	0.2	0.5	0.8	0.4	0.3	1.4	18.4
LPG	5.6	0.7	0.9	1.2	0.7	0.6	1.6	15.5
Billion Dollars								
Space-Heating Expenditures, Major Fuels Used:								
Electricity	8.56	0.98	2.16	2.58	1.04	0.69	1.11	9.3
Natural Gas	24.11	1.76	2.30	3.09	3.22	3.56	10.17	7.8
Fuel Oil	6.07	0.19	0.36	0.55	0.81	0.88	3.28	17.3
Kerosene	0.50	0.03	0.06	0.09	0.05	0.03	0.23	29.8
LPG	2.79	0.35	0.36	0.53	0.33	0.22	1.00	18.2
Total	42.03	3.32	5.23	6.85	5.44	5.38	15.80	4.7
Dollars per Household								
Average Space-Heating Expenditures per Household								
Using a Major Fuel ²	421	347	306	357	385	433	578	3.0
For Main Space Heating	425	350	309	362	388	435	585	3.0
For Secondary Space Heating Only	175	Q	102	170	186	211	220	22.4
Million Households								
Number of Households, Where the Main Space-Heating Fuel Is:								
Electricity	29.6	3.9	9.3	8.5	3.4	2.2	2.3	8.4
Natural Gas	53.5	4.7	6.2	8.1	8.3	8.1	18.1	6.5
Fuel Oil	9.5	0.3	0.5	1.0	1.5	1.4	4.7	14.6
Kerosene	1.0	Q	0.1	0.3	Q	Q	0.3	29.8
LPG	4.6	0.6	0.7	1.0	0.6	0.5	1.4	17.1
Other	2.6	Q	0.4	0.6	0.4	0.2	0.8	21.3
No Space Heating	0.8	Q	Q	0.2	Q	Q	0.2	35.5

See footnotes at end of table.

Table CE2-2e. Space-Heating Energy Expenditures in U.S. Households by Year of Construction, 1997 (Continued)

	Year of Construction							RSE Row Factors
	Total	1990 to 1997 ¹	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.5	1.2	1.0	1.1	1.1	0.9	
Dollars per Household⁴								
Space-Heating Expenditures per Household,³ Where the Main Space-Heating Fuel Is:								
Electricity	270	246	225	295	275	271	389	6.3
Natural Gas	446	371	357	378	380	436	562	4.0
Fuel Oil	629	695	638	544	536	605	679	7.6
Kerosene	350	Q	350	267	Q	Q	400	17.9
LPG	567	579	501	511	540	415	698	8.0
1997 Heating Degree-Days (HDD) per Household⁴								
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:								
Electricity	3,225	3,362	3,038	3,293	3,182	3,048	3,742	5.9
Natural Gas	4,710	4,507	4,536	4,652	4,304	4,481	5,137	3.4
Fuel Oil	5,707	6,313	5,915	5,521	5,518	5,657	5,762	3.9
Kerosene	4,959	Q	6,111	4,141	Q	Q	4,820	12.5
LPG	4,863	4,973	4,771	4,248	4,525	4,145	5,680	7.3
Average for All Households	4,368	4,129	3,780	4,057	4,171	4,344	5,152	2.5
Heated Square Footage (HSF) per Household⁴								
Heated Square Footage per Household,⁵ Where the Main Space-Heating Fuel Is:								
Electricity	1,468	1,599	1,500	1,481	1,352	1,347	1,367	3.6
Natural Gas	1,757	2,468	2,041	1,676	1,660	1,565	1,641	3.0
Fuel Oil	1,844	3,043	2,204	1,880	1,683	1,757	1,805	5.6
Kerosene	1,023	Q	1,011	859	Q	Q	1,122	7.5
LPG	1,676	2,125	1,857	1,393	1,522	1,428	1,754	7.3
Average for All Households	1,667	2,099	1,733	1,573	1,574	1,541	1,646	2.1
Space-Heating Intensity [Cents÷(HDD×(HSF÷1000))]⁴								
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:								
Electricity	5.70	4.58	4.95	6.04	6.40	6.60	7.60	5.4
Natural Gas	5.39	3.33	3.86	4.85	5.32	6.22	6.66	3.7
Fuel Oil	5.98	3.62	4.89	5.24	5.77	6.08	6.53	7.5
Kerosene	6.89	Q	5.66	7.49	Q	Q	7.40	16.9
LPG	6.96	5.48	5.65	8.64	7.84	7.01	7.01	10.6

¹ New construction for 1997 includes only those housing units built and occupied between January and the April-August period when the household interviews were conducted.

² The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

³ Includes only the space-heating expenditures of the space-heating fuel. Not included are: 1) the expenditures of the main space-heating fuel for uses other than space heating; 2) the expenditures of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the expenditures of other fuels that are used as secondary space-heating fuels.

⁴ Averages are for those households using each of the main space-heating fuels.

⁵ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE2-3e. Space-Heating Energy Expenditures in U.S. Households by Household Income, 1997

	Total	1997 Household Income				Below Poverty Line	Eligible for Federal Assistance ¹	RSE Row Factors
		Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.7	1.4	1.0	0.9	1.0	1.3	1.0	
Million Households								
Total U.S. Households	101.5	13.3	29.1	31.1	27.9	14.6	34.1	2.8
No Space Heating	0.8	0.2	0.4	0.1	Q	0.3	0.5	25.9
Space Heating	100.7	13.1	28.8	31.0	27.8	14.3	33.5	2.8
Not Using a Major Fuel ²	1.0	0.3	0.2	0.3	Q	0.3	0.6	26.1
Using a Major Fuel ²	99.7	12.8	28.5	30.7	27.6	14.0	33.0	2.9
For Main Space Heating	98.1	12.7	28.0	30.3	27.1	13.9	32.5	2.9
For Secondary Space Heating Only	1.6	Q	0.6	0.5	0.5	Q	0.4	18.7
Number of Households with Space Heating, Major Fuels Used (more than one may apply):								
Electricity	42.0	5.6	12.1	12.3	11.9	5.8	13.7	5.0
Natural Gas	54.5	6.4	14.9	17.1	16.1	7.3	17.0	4.7
Fuel Oil	9.8	1.3	2.5	3.1	2.9	1.4	3.4	10.4
Kerosene	3.5	0.4	1.2	1.2	0.6	0.6	1.4	14.4
LPG	5.6	0.7	1.7	2.1	1.2	0.8	1.9	14.2
Billion Dollars								
Space-Heating Expenditures, Major Fuels Used:								
Electricity	8.56	1.03	2.35	2.44	2.75	1.10	2.62	8.0
Natural Gas	24.11	2.43	6.09	7.59	8.00	2.64	6.82	6.1
Fuel Oil	6.07	0.49	1.32	1.89	2.37	0.52	1.61	13.0
Kerosene	0.50	0.08	0.19	0.17	0.06	0.12	0.22	23.4
LPG	2.79	0.30	0.84	1.03	0.61	0.35	0.92	16.7
Total	42.03	4.33	10.78	13.12	13.79	4.73	12.20	3.3
Dollars per Household								
Average Space-Heating Expenditures per Household								
Using a Major Fuel ²	421	338	378	427	499	338	370	2.6
For Main Space Heating	425	339	382	431	504	340	373	2.6
For Secondary Space Heating Only	175	Q	154	155	231	Q	144	20.0
Million Households								
Number of Households, Where the Main Space-Heating Fuel Is:								
Electricity	29.6	4.4	9.1	8.5	7.6	4.4	10.4	6.6
Natural Gas	53.5	6.2	14.7	16.6	15.9	7.2	16.8	4.8
Fuel Oil	9.5	1.3	2.4	3.0	2.8	1.3	3.3	10.4
Kerosene	1.0	0.2	0.3	0.4	Q	0.3	0.5	23.7
LPG	4.6	0.6	1.5	1.8	0.8	0.7	1.6	14.9
Other	2.6	0.4	0.8	0.7	0.6	0.4	1.0	18.0
No Space Heating	0.8	0.2	0.4	0.1	Q	0.3	0.5	25.9

See footnotes at end of table.

Table CE2-3e. Space-Heating Energy Expenditures in U.S. Households by Household Income, 1997 (Continued)

	1997 Household Income					Below Poverty Line	Eligible for Federal Assistance ¹	RSE Row Factors
	Total	Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.7	1.4	1.0	0.9	1.0	1.3	1.0	
Dollars per Household⁴								
Space-Heating Expenditures per Household,³ Where the Main Space-Heating Fuel Is:								
Electricity	270	219	244	269	331	234	236	5.2
Natural Gas	446	386	411	448	500	367	404	3.6
Fuel Oil	629	388	538	617	832	387	488	6.0
Kerosene	350	286	320	386	Q	328	306	16.7
LPG	567	472	553	560	685	479	540	6.6
1997 Heating Degree-Days (HDD) per Household⁴								
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:								
Electricity	3,225	3,429	3,122	3,227	3,228	3,356	3,317	4.3
Natural Gas	4,710	4,252	4,503	4,927	4,853	4,223	4,415	2.8
Fuel Oil	5,707	5,186	6,001	5,686	5,715	5,264	5,648	2.9
Kerosene	4,959	3,593	4,758	5,801	Q	3,722	4,123	12.1
LPG	4,863	4,326	4,725	5,185	4,806	4,440	4,598	6.6
Average for All Households	4,368	4,051	4,198	4,552	4,486	4,048	4,192	2.0
Heated Square Footage (HSF) per Household⁴								
Heated Square Footage per Household,⁵ Where the Main Space-Heating Fuel Is:								
Electricity	1,468	981	1,226	1,468	2,037	1,080	1,140	2.6
Natural Gas	1,757	1,152	1,363	1,750	2,366	1,208	1,312	2.7
Fuel Oil	1,844	1,023	1,514	1,824	2,525	1,088	1,328	4.0
Kerosene	1,023	975	910	1,087	Q	1,001	963	7.0
LPG	1,676	1,092	1,448	1,833	2,201	1,103	1,411	5.3
Average for All Households	1,667	1,074	1,331	1,675	2,283	1,146	1,259	1.8
Space-Heating Intensity [Cents÷(HDD×(HSF÷1000))]⁴								
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:								
Electricity	5.70	6.51	6.36	5.68	5.04	6.44	6.25	4.3
Natural Gas	5.39	7.88	6.70	5.20	4.35	7.19	6.97	3.6
Fuel Oil	5.98	7.31	5.92	5.95	5.76	6.75	6.51	6.9
Kerosene	6.89	8.17	7.39	6.12	Q	8.80	7.71	12.9
LPG	6.96	9.98	8.08	5.89	6.47	9.77	8.32	9.1

¹ Below 150 percent of poverty line or 60 percent of median State income.

² The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

³ Includes only the space-heating expenditures of the space-heating fuel. Not included are: 1) the expenditures of the main space-heating fuel for uses other than space heating; 2) the expenditures of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the expenditures of other fuels that are used as secondary space-heating fuels.

⁴ Averages are for those households using each of the main space-heating fuels.

⁵ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE2-4e. Space-Heating Energy Expenditures in U.S. Households by Type of Housing Unit, 1997

	Type of Housing Unit					RSE Row Factors
	Total	Single-Family	Multifamily		Mobile Home	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.6	0.6	1.7	1.2	1.4	
Million Households						
Total U.S. Households	101.5	73.7	5.6	15.8	6.3	4.2
No Space Heating	0.8	0.4	Q	0.3	Q	37.0
Space Heating	100.7	73.4	5.6	15.5	6.2	4.2
Not Using a Major Fuel ¹	1.0	0.6	Q	0.2	Q	34.0
Using a Major Fuel ¹	99.7	72.7	5.6	15.3	6.1	4.2
For Main Space Heating	98.1	71.3	5.6	15.3	5.9	4.3
For Secondary Space Heating Only	1.6	1.4	Q	Q	0.2	21.7
Number of Households with Space Heating, Major Fuels Used (more than one may apply):						
Electricity	42.0	28.0	2.1	8.7	3.2	6.6
Natural Gas	54.5	43.4	3.5	5.5	2.1	7.0
Fuel Oil	9.8	7.4	0.5	1.8	Q	13.0
Kerosene	3.5	2.7	Q	Q	0.6	14.8
LPG	5.6	4.4	Q	Q	1.1	15.4
Billion Dollars						
Space-Heating Expenditures, Major Fuels Used:						
Electricity	8.56	6.45	0.46	0.88	0.77	9.2
Natural Gas	24.11	20.64	1.66	1.07	0.74	9.0
Fuel Oil	6.07	5.40	0.28	0.35	Q	16.8
Kerosene	0.50	0.32	Q	Q	0.16	25.5
LPG	2.79	2.26	Q	Q	0.47	17.9
Total	42.03	35.07	2.45	2.34	2.18	4.5
Dollars per Household						
Average Space-Heating Expenditures per Household						
Using a Major Fuel ¹	421	482	436	153	357	3.2
For Main Space Heating	425	488	436	153	362	3.2
For Secondary Space Heating Only	175	177	Q	Q	168	20.1
Million Households						
Number of Households, Where the Main Space-Heating Fuel Is:						
Electricity	29.6	17.7	1.6	7.9	2.4	8.6
Natural Gas	53.5	42.5	3.4	5.5	2.1	7.2
Fuel Oil	9.5	7.1	0.5	1.8	Q	13.1
Kerosene	1.0	0.5	Q	Q	0.4	26.1
LPG	4.6	3.5	Q	Q	1.0	16.7
Other	2.6	2.1	Q	0.2	0.3	23.5
No Space Heating	0.8	0.4	Q	0.3	Q	37.0

See footnotes at end of table.

Table CE2-4e. Space-Heating Energy Expenditures in U.S. Households by Type of Housing Unit, 1997 (Continued)

	Type of Housing Unit					RSE Row Factors
	Total	Single-Family	Multifamily		Mobile Home	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.6	0.6	1.7	1.2	1.4	
Dollars per Household³						
Space-Heating Expenditures per Household,² Where the Main Space-Heating Fuel Is:						
Electricity	270	337	269	108	306	5.5
Natural Gas	446	481	481	194	350	4.4
Fuel Oil	629	745	606	193	Q	7.2
Kerosene	350	341	Q	Q	378	18.4
LPG	567	602	Q	Q	451	6.5
1997 Heating Degree-Days (HDD) per Household³						
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:						
Electricity	3,225	3,165	3,728	3,132	3,644	5.4
Natural Gas	4,710	4,679	5,111	4,713	4,665	3.6
Fuel Oil	5,707	5,878	6,139	4,960	Q	3.7
Kerosene	4,959	4,503	Q	Q	5,288	13.4
LPG	4,863	5,050	Q	Q	4,116	7.4
Average for All Households	4,368	4,439	4,816	3,930	4,215	2.7
Heated Square Footage (HSF) per Household³						
Heated Square Footage per Household,⁴ Where the Main Space-Heating Fuel Is:						
Electricity	1,468	1,823	910	892	1,116	2.8
Natural Gas	1,757	1,979	1,020	824	893	2.4
Fuel Oil	1,844	2,176	976	812	Q	2.5
Kerosene	1,023	1,182	Q	Q	881	6.4
LPG	1,676	1,888	Q	Q	995	4.6
Average for All Households	1,667	1,950	982	858	998	1.7
Space-Heating Intensity [Cents÷(HDD×(HSF÷1000))]³						
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:						
Electricity	5.70	5.84	7.92	3.88	7.52	4.6
Natural Gas	5.39	5.19	9.22	4.99	8.40	4.1
Fuel Oil	5.98	5.83	10.11	4.79	Q	7.9
Kerosene	6.89	6.42	Q	Q	8.11	14.9
LPG	6.96	6.32	Q	Q	11.00	9.5

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the space-heating expenditures of the space-heating fuel. Not included are: 1) the expenditures of the main space-heating fuel for uses other than space heating; 2) the expenditures of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the expenditures of other fuels that are used as secondary space-heating fuels.

³ Averages are for those households using each of the main space-heating fuels.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE2-7e. Space-Heating Energy Expenditures in U.S. Households by Four Most Populated States, 1997

	Total U.S.	Four Most Populated States				RSE Row Factors
		New York	California	Texas	Florida	
RSE Column Factor:	0.4	1.1	0.9	1.3	2.1	
Million Households						
Total U.S. Households	101.5	6.8	11.5	7.0	5.9	NF
No Space Heating	0.8	Q	Q	Q	Q	52.1
Space Heating	100.7	6.8	11.4	6.9	5.7	1.1
Not Using a Major Fuel ¹	1.0	Q	0.1	Q	Q	42.8
Using a Major Fuel ¹	99.7	6.7	11.2	6.9	5.7	1.1
For Main Space Heating	98.1	6.6	11.0	6.9	5.7	1.0
For Secondary Space Heating Only	1.6	Q	0.2	Q	Q	30.6
Number of Households with Space Heating, Major Fuels Used (more than one may apply):						
Electricity	42.0	1.3	4.1	3.8	4.8	7.0
Natural Gas	54.5	3.4	7.9	3.9	0.8	7.5
Fuel Oil	9.8	2.8	Q	Q	Q	18.7
Kerosene	3.5	Q	Q	Q	Q	25.1
LPG	5.6	Q	0.2	0.3	Q	26.6
Billion Dollars						
Space-Heating Expenditures, Major Fuels Used:						
Electricity	8.56	0.25	0.51	0.66	0.31	14.5
Natural Gas	24.11	2.52	1.25	0.98	0.11	10.0
Fuel Oil	6.07	1.59	Q	Q	Q	27.2
Kerosene	0.50	Q	Q	Q	Q	46.7
LPG	2.79	Q	0.09	0.08	Q	28.1
Total	42.03	4.45	1.91	1.72	0.47	5.9
Dollars per Household						
Average Space-Heating Expenditures per Household						
Using a Major Fuel ¹	421	661	170	248	83	6.0
For Main Space Heating	425	665	171	249	83	6.0
For Secondary Space Heating Only	175	Q	108	Q	Q	32.2
Million Households						
Number of Households, Where the Main Space-Heating Fuel Is:						
Electricity	29.6	0.4	2.9	2.9	4.7	10.7
Natural Gas	53.5	3.4	7.8	3.8	0.7	8.6
Fuel Oil	9.5	2.7	Q	Q	Q	17.9
Kerosene	1.0	Q	Q	Q	Q	47.0
LPG	4.6	Q	0.2	0.3	Q	27.9
Other	2.6	0.2	0.3	Q	Q	26.8
No Space Heating	0.8	Q	Q	Q	Q	52.1

See footnotes at end of table.

Table CE2-7e. Space-Heating Energy Expenditures in U.S. Households by Four Most Populated States, 1997 (Continued)

	Four Most Populated States				RSE Row Factors	
	Total U.S.	New York	California	Texas		Florida
RSE Column Factor:	0.4	1.1	0.9	1.3	2.1	
Dollars per Household³						
Space-Heating Expenditures per Household,² Where the Main Space-Heating Fuel Is:						
Electricity	270	523	155	215	64	13.9
Natural Gas	446	742	158	254	136	4.8
Fuel Oil	629	570	Q	Q	Q	12.3
Kerosene	350	Q	Q	Q	Q	29.9
LPG	567	Q	417	303	Q	11.0
1997 Heating Degree-Days (HDD) per Household³						
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:						
Electricity	3,225	6,058	1,853	2,167	457	9.0
Natural Gas	4,710	5,976	1,775	2,589	760	7.9
Fuel Oil	5,707	5,003	Q	Q	Q	5.0
Kerosene	4,959	Q	Q	Q	Q	24.8
LPG	4,863	Q	3,415	2,810	Q	12.6
Average for All Households	4,368	5,579	1,870	2,422	503	5.2
Heated Square Footage (HSF) per Household³						
Heated Square Footage per Household,⁴ Where the Main Space-Heating Fuel Is:						
Electricity	1,468	1,199	1,235	1,355	1,567	5.4
Natural Gas	1,757	1,799	1,438	1,608	1,906	5.4
Fuel Oil	1,844	1,496	Q	Q	Q	6.6
Kerosene	1,023	Q	Q	Q	Q	11.5
LPG	1,676	Q	1,253	1,344	Q	6.8
Average for All Households	1,667	1,628	1,381	1,492	1,597	3.3
Space-Heating Intensity [Cents÷(HDD×(HSF÷1000))]³						
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:						
Electricity	5.70	7.20	6.77	7.31	9.01	6.8
Natural Gas	5.39	6.90	6.19	6.10	9.39	6.4
Fuel Oil	5.98	7.61	Q	Q	Q	11.8
Kerosene	6.89	Q	Q	Q	Q	27.1
LPG	6.96	Q	9.75	8.04	Q	16.0

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the space-heating expenditures of the space-heating fuel. Not included are: 1) the expenditures of the main space-heating fuel for uses other than space heating; 2) the expenditures of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the expenditures of other fuels that are used as secondary space-heating fuels.

³ Averages are for those households using each of the main space-heating fuels.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE2-8e. Space-Heating Energy Expenditures in U.S. Households by Urban/Rural Location, 1997

	Urban/Rural Location ¹					RSE Row Factors
	Total	City	Town	Suburbs	Rural	
	0.6	1.0	1.3	1.2	1.0	
Million Households						
Total U.S. Households	101.5	48.2	18.2	18.6	16.5	4.2
No Space Heating	0.8	0.5	Q	0.2	Q	22.5
Space Heating	100.7	47.7	18.2	18.4	16.4	4.2
Not Using a Major Fuel ²	1.0	0.3	0.1	Q	0.5	27.6
Using a Major Fuel ²	99.7	47.4	18.0	18.4	15.9	4.2
For Main Space Heating	98.1	47.2	17.8	18.3	14.8	4.2
For Secondary Space Heating Only	1.6	0.2	0.2	Q	1.1	19.8
Number of Households with Space Heating, Major Fuels Used (more than one may apply):						
Electricity	42.0	18.7	7.5	8.1	7.7	5.5
Natural Gas	54.5	30.3	9.6	11.2	3.5	6.2
Fuel Oil	9.8	3.2	2.3	1.6	2.8	11.6
Kerosene	3.5	1.0	0.6	0.5	1.4	16.1
LPG	5.6	0.5	1.0	0.3	3.8	17.8
Billion Dollars						
Space-Heating Expenditures, Major Fuels Used:						
Electricity	8.56	3.04	1.74	1.73	2.05	8.2
Natural Gas	24.11	12.72	4.54	5.15	1.70	7.6
Fuel Oil	6.07	1.51	1.51	1.11	1.94	13.7
Kerosene	0.50	0.09	0.13	0.03	0.25	24.8
LPG	2.79	0.18	0.55	0.14	1.91	20.2
Total	42.03	17.54	8.46	8.17	7.86	4.4
Dollars per Household						
Average Space-Heating Expenditures per Household						
Using a Major Fuel ²	421	370	469	444	495	2.7
For Main Space Heating	425	371	472	446	519	2.6
For Secondary Space Heating Only	175	160	165	Q	185	19.6
Million Households						
Number of Households, Where the Main Space-Heating Fuel Is:						
Electricity	29.6	13.9	5.0	5.5	5.2	7.2
Natural Gas	53.5	29.7	9.5	11.0	3.3	6.2
Fuel Oil	9.5	3.1	2.3	1.5	2.6	11.6
Kerosene	1.0	0.2	0.2	Q	0.6	26.5
LPG	4.6	0.4	0.9	0.2	3.1	19.1
Other	2.6	0.5	0.3	Q	1.6	18.1
No Space Heating	0.8	0.5	Q	0.2	Q	22.5

See footnotes at end of table.

Table CE2-8e. Space-Heating Energy Expenditures in U.S. Households by Urban/Rural Location, 1997 (Continued)

	Urban/Rural Location ¹					RSE Row Factors
	Total	City	Town	Suburbs	Rural	
RSE Column Factor:	0.6	1.0	1.3	1.2	1.0	
Dollars per Household⁴						
Space-Heating Expenditures per Household,³ Where the Main Space-Heating Fuel Is:						
Electricity	270	204	327	298	363	5.1
Natural Gas	446	424	477	464	502	3.6
Fuel Oil	629	479	656	727	729	5.3
Kerosene	350	299	453	Q	342	17.8
LPG	567	439	596	609	571	8.2
1997 Heating Degree-Days (HDD) per Household⁴						
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:						
Electricity	3,225	2,756	4,075	3,104	3,799	4.5
Natural Gas	4,710	4,475	5,083	4,976	4,857	3.1
Fuel Oil	5,707	5,402	6,204	5,103	5,993	3.6
Kerosene	4,959	3,301	5,921	Q	5,230	11.5
LPG	4,863	4,247	5,691	3,659	4,777	9.3
Average for All Households	4,368	4,023	4,986	4,405	4,678	2.2
Heated Square Footage (HSF) per Household⁴						
Heated Square Footage per Household,⁵ Where the Main Space-Heating Fuel Is:						
Electricity	1,468	1,276	1,408	1,755	1,738	2.8
Natural Gas	1,757	1,597	1,801	2,087	1,965	2.8
Fuel Oil	1,844	1,345	1,851	2,390	2,116	3.6
Kerosene	1,023	943	1,043	Q	1,032	7.0
LPG	1,676	1,362	1,529	2,194	1,720	8.0
Average for All Households	1,667	1,482	1,675	2,011	1,824	1.9
Space-Heating Intensity [Cents÷(HDD×(HSF÷1000))]⁴						
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:						
Electricity	5.70	5.79	5.69	5.48	5.49	4.5
Natural Gas	5.39	5.93	5.21	4.46	5.26	3.5
Fuel Oil	5.98	6.60	5.72	5.96	5.74	6.1
Kerosene	6.89	9.61	7.33	Q	6.34	16.5
LPG	6.96	7.59	6.85	7.58	6.95	11.2

¹ Based on the household respondent's description rather than the Federal Government definition.

² The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

³ Includes only the space-heating expenditures of the space-heating fuel. Not included are: 1) the expenditures of the main space-heating fuel for uses other than space heating; 2) the expenditures of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the expenditures of other fuels that are used as secondary space-heating fuels.

⁴ Averages are for those households using each of the main space-heating fuels.

⁵ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE2-9e. Space-Heating Energy Expenditures in U.S. Households by Northeast Census Region, 1997

	Northeast Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Middle Atlantic	New England	
RSE Column Factor:	0.6	1.0	1.3	1.4	
Million Households					
Total U.S. Households	101.5	19.7	14.4	5.3	NF
No Space Heating	0.8	Q	Q	Q	33.3
Space Heating	100.7	19.7	14.4	5.3	NF
Not Using a Major Fuel ¹	1.0	0.2	Q	Q	29.1
Using a Major Fuel ¹	99.7	19.5	14.3	5.2	NF
For Main Space Heating	98.1	19.2	14.1	5.1	1.0
For Secondary Space Heating Only	1.6	0.3	0.2	0.1	25.6
Number of Households with Space Heating, Major Fuels Used (more than one may apply):					
Electricity	42.0	5.0	3.8	1.2	7.3
Natural Gas	54.5	9.2	7.7	1.5	9.5
Fuel Oil	9.8	7.3	4.5	2.8	10.1
Kerosene	3.5	0.9	0.6	0.3	19.9
LPG	5.6	0.4	0.2	0.1	27.6
Billion Dollars					
Space-Heating Expenditures, Major Fuels Used:					
Electricity	8.56	1.39	1.00	0.39	12.3
Natural Gas	24.11	6.39	5.28	1.11	9.9
Fuel Oil	6.07	4.62	2.67	1.96	12.8
Kerosene	0.50	0.24	0.12	0.12	30.6
LPG	2.79	0.19	0.12	0.07	30.9
Total	42.03	12.83	9.18	3.65	1.9
Dollars per Household					
Average Space-Heating Expenditures per Household					
Using a Major Fuel ¹	421	657	642	699	2.0
For Main Space Heating	425	663	647	707	2.0
For Secondary Space Heating Only	175	294	285	311	20.2
Million Households					
Number of Households, Where the Main Space-Heating Fuel Is:					
Electricity	29.6	2.3	1.7	0.6	12.3
Natural Gas	53.5	9.2	7.7	1.5	9.5
Fuel Oil	9.5	7.1	4.4	2.7	10.1
Kerosene	1.0	0.4	0.2	Q	30.9
LPG	4.6	0.2	Q	Q	27.9
Other	2.6	0.5	0.3	0.2	22.8
No Space Heating	0.8	Q	Q	Q	33.3

See footnotes at end of table.

Table CE2-9e. Space-Heating Energy Expenditures in U.S. Households by Northeast Census Region, 1997 (Continued)

	Northeast Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Middle Atlantic	New England	
RSE Column Factor:	0.6	1.0	1.3	1.4	
Dollars per Household³					
Space-Heating Expenditures per Household,² Where the Main Space-Heating Fuel Is:					
Electricity	270	534	522	565	4.9
Natural Gas	446	697	685	763	3.6
Fuel Oil	629	641	599	707	5.3
Kerosene	350	467	441	494	15.2
LPG	567	718	Q	Q	9.1
1997 Heating Degree-Days (HDD) per Household³					
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:					
Electricity	3,225	5,812	5,729	6,028	2.2
Natural Gas	4,710	5,801	5,773	5,954	1.7
Fuel Oil	5,707	5,753	5,162	6,696	3.1
Kerosene	4,959	6,647	5,739	7,557	8.3
LPG	4,863	6,457	Q	Q	7.1
Average for All Households	4,368	5,811	5,579	6,449	2.2
Heated Square Footage (HSF) per Household³					
Heated Square Footage per Household,⁴ Where the Main Space-Heating Fuel Is:					
Electricity	1,468	1,516	1,541	1,451	6.8
Natural Gas	1,757	1,800	1,817	1,706	4.1
Fuel Oil	1,844	1,801	1,731	1,914	3.0
Kerosene	1,023	1,103	1,049	1,157	6.3
LPG	1,676	1,590	Q	Q	8.2
Average for All Households	1,667	1,748	1,745	1,757	2.3
Space-Heating Intensity [Cents÷(HDD×(HSF÷1000))]³					
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:					
Electricity	5.70	6.06	5.92	6.46	6.6
Natural Gas	5.39	6.68	6.53	7.51	3.6
Fuel Oil	5.98	6.18	6.70	5.52	6.1
Kerosene	6.89	6.38	7.33	5.65	16.2
LPG	6.96	7.00	Q	Q	13.6

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the space-heating expenditures of the space-heating fuel. Not included are: 1) the expenditures of the main space-heating fuel for uses other than space heating; 2) the expenditures of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the expenditures of other fuels that are used as secondary space-heating fuels.

³ Averages are for those households using each of the main space-heating fuels.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE2-10e. Space-Heating Energy Expenditures in U.S. Households
by Midwest Census Region, 1997**

	Total U.S.	Midwest Census Region			RSE Row Factors
		Total	Census Division		
			East North Central	West North Central	
RSE Column Factor:	0.5	1.0	1.1	1.6	
Million Households					
Total U.S. Households	101.5	24.1	16.9	7.2	NF
No Space Heating	0.8	Q	Q	Q	34.3
Space Heating	100.7	24.1	16.9	7.2	NF
Not Using a Major Fuel ¹	1.0	0.3	Q	Q	40.1
Using a Major Fuel ¹	99.7	23.8	16.8	7.0	0.6
For Main Space Heating	98.1	23.5	16.6	6.8	1.5
For Secondary Space Heating Only	1.6	0.3	Q	Q	28.5
Number of Households with Space Heating, Major Fuels Used (more than one may apply):					
Electricity	42.0	6.2	4.2	2.0	7.2
Natural Gas	54.5	18.1	13.3	4.8	5.3
Fuel Oil	9.8	1.1	0.6	0.4	17.5
Kerosene	3.5	0.4	0.4	Q	16.8
LPG	5.6	2.0	1.0	1.0	20.2
Billion Dollars					
Space-Heating Expenditures, Major Fuels Used:					
Electricity	8.56	1.22	0.80	0.42	17.0
Natural Gas	24.11	9.78	7.34	2.44	7.3
Fuel Oil	6.07	0.70	0.44	0.26	20.1
Kerosene	0.50	Q	Q	Q	30.7
LPG	2.79	1.30	0.77	0.53	20.6
Total	42.03	13.03	9.38	3.65	2.5
Dollars per Household					
Average Space-Heating Expenditures per Household					
Using a Major Fuel ¹	421	548	560	519	2.6
For Main Space Heating	425	553	562	530	2.5
For Secondary Space Heating Only	175	192	Q	109	27.5
Million Households					
Number of Households, Where the Main Space-Heating Fuel Is:					
Electricity	29.6	2.7	1.9	0.8	15.6
Natural Gas	53.5	17.9	13.2	4.7	5.4
Fuel Oil	9.5	1.0	0.6	0.4	17.1
Kerosene	1.0	Q	Q	Q	30.9
LPG	4.6	1.8	0.9	0.9	21.8
Other	2.6	0.6	0.3	Q	31.4
No Space Heating	0.8	Q	Q	Q	34.3

See footnotes at end of table.

Table CE2-10e. Space-Heating Energy Expenditures in U.S. Households by Midwest Census Region, 1997 (Continued)

	Midwest Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			East North Central	West North Central	
RSE Column Factor:	0.5	1.0	1.1	1.6	
Dollars per Household³					
Space-Heating Expenditures per Household,² Where the Main Space-Heating Fuel Is:					
Electricity	270	405	383	455	6.9
Natural Gas	446	542	553	512	3.4
Fuel Oil	629	662	682	630	4.3
Kerosene	350	Q	Q	Q	19.7
LPG	567	705	807	596	6.3
1997 Heating Degree-Days (HDD) per Household³					
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:					
Electricity	3,225	6,120	6,302	5,712	3.1
Natural Gas	4,710	6,596	6,586	6,624	2.1
Fuel Oil	5,707	7,484	7,153	8,002	3.0
Kerosene	4,959	Q	Q	Q	16.3
LPG	4,863	6,747	6,561	6,949	4.1
Average for All Households	4,368	6,592	6,574	6,635	1.9
Heated Square Footage (HSF) per Household³					
Heated Square Footage per Household,⁴ Where the Main Space-Heating Fuel Is:					
Electricity	1,468	1,519	1,288	2,033	6.5
Natural Gas	1,757	1,973	1,951	2,033	3.2
Fuel Oil	1,844	2,057	2,004	2,140	3.9
Kerosene	1,023	Q	Q	Q	7.5
LPG	1,676	1,926	2,028	1,816	6.4
Average for All Households	1,667	1,919	1,881	2,012	2.1
Space-Heating Intensity [Cents÷{HDD×(HSF÷1000)}]³					
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:					
Electricity	5.70	4.36	4.71	3.91	5.6
Natural Gas	5.39	4.17	4.30	3.80	3.7
Fuel Oil	5.98	4.30	4.76	3.68	4.9
Kerosene	6.89	Q	Q	Q	17.8
LPG	6.96	5.43	6.06	4.72	11.4

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the space-heating expenditures of the space-heating fuel. Not included are: 1) the expenditures of the main space-heating fuel for uses other than space heating; 2) the expenditures of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the expenditures of other fuels that are used as secondary space-heating fuels.

³ Averages are for those households using each of the main space-heating fuels.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE2-11e. Space-Heating Energy Expenditures in U.S. Households by South Census Region, 1997

	South Census Region					RSE Row Factors
	Total U.S.	Census Division			RSE Column Factor:	
		Total	South Atlantic	East South Central		
	0.5	0.9	1.2	1.4	1.4	
Million Households						
Total U.S. Households	101.5	35.9	18.7	6.3	10.8	NF
No Space Heating	0.8	0.3	Q	Q	Q	44.1
Space Heating	100.7	35.6	18.5	6.3	10.8	NF
Not Using a Major Fuel ¹	1.0	0.2	Q	Q	Q	39.5
Using a Major Fuel ¹	99.7	35.4	18.3	6.3	10.8	NF
For Main Space Heating	98.1	34.8	18.0	6.1	10.7	NF
For Secondary Space Heating Only	1.6	0.6	0.3	0.2	Q	20.2
Number of Households with Space Heating, Major Fuels Used (more than one may apply):						
Electricity	42.0	21.3	12.0	3.8	5.6	4.8
Natural Gas	54.5	14.4	5.7	2.4	6.3	7.3
Fuel Oil	9.8	1.1	1.1	Q	Q	28.3
Kerosene	3.5	1.9	1.3	0.4	Q	15.6
LPG	5.6	2.6	1.2	1.0	0.4	17.4
Billion Dollars						
Space-Heating Expenditures, Major Fuels Used:						
Electricity	8.56	4.26	2.28	0.94	1.03	9.0
Natural Gas	24.11	5.05	2.38	0.87	1.80	10.6
Fuel Oil	6.07	0.58	0.57	Q	Q	30.1
Kerosene	0.50	0.19	0.15	0.04	Q	23.9
LPG	2.79	1.01	0.50	0.38	0.13	21.1
Total	42.03	11.10	5.88	2.25	2.97	4.5
Dollars per Household						
Average Space-Heating Expenditures per Household						
Using a Major Fuel ¹	421	314	321	358	275	4.5
For Main Space Heating	425	317	324	365	277	4.4
For Secondary Space Heating Only	175	124	157	91	Q	25.3
Million Households						
Number of Households, Where the Main Space-Heating Fuel Is:						
Electricity	29.6	17.5	10.4	2.9	4.2	7.2
Natural Gas	53.5	13.7	5.4	2.3	6.1	7.5
Fuel Oil	9.5	1.1	1.1	Q	Q	27.5
Kerosene	1.0	0.4	0.4	Q	Q	20.8
LPG	4.6	2.1	0.8	0.8	0.4	18.1
Other	2.6	0.8	0.5	0.2	Q	19.7
No Space Heating	0.8	0.3	Q	Q	Q	44.1

See footnotes at end of table.

Table CE2-11e. Space-Heating Energy Expenditures in U.S. Households by South Census Region, 1997 (Continued)

	South Census Region					RSE Row Factors
	Total U.S.	Census Division			West south Central	
		Total	South Atlantic	East South Central		
RSE Column Factor:	0.5	0.9	1.2	1.4	1.4	
Dollars per Household³						
Space-Heating Expenditures per Household,² Where the Main Space-Heating Fuel Is:						
Electricity	270	233	213	312	230	5.9
Natural Gas	446	358	432	367	288	5.8
Fuel Oil	629	518	516	Q	Q	6.6
Kerosene	350	221	196	Q	Q	19.6
LPG	567	451	553	408	330	8.4
1997 Heating Degree-Days (HDD) per Household³						
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:						
Electricity	3,225	2,382	2,110	3,403	2,346	6.3
Natural Gas	4,710	2,970	3,197	3,326	2,637	5.6
Fuel Oil	5,707	3,857	3,844	Q	Q	7.2
Kerosene	4,959	3,010	2,871	Q	Q	10.4
LPG	4,863	2,991	2,832	3,250	2,766	9.5
Average for All Households	4,368	2,705	2,588	3,362	2,527	4.1
Heated Square Footage (HSF) per Household³						
Heated Square Footage per Household,⁴ Where the Main Space-Heating Fuel Is:						
Electricity	1,468	1,532	1,586	1,601	1,351	2.5
Natural Gas	1,757	1,627	1,744	1,559	1,550	3.2
Fuel Oil	1,844	1,785	1,786	Q	Q	6.2
Kerosene	1,023	919	920	Q	Q	6.4
LPG	1,676	1,531	1,781	1,404	1,275	5.5
Average for All Households	1,667	1,570	1,640	1,552	1,462	2.1
Space-Heating Intensity [Cents÷(HDD×(HSF÷1000))]³						
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:						
Electricity	5.70	6.40	6.36	5.73	7.26	6.1
Natural Gas	5.39	7.40	7.76	7.09	7.05	6.0
Fuel Oil	5.98	7.53	7.52	Q	Q	11.2
Kerosene	6.89	8.01	7.43	Q	Q	18.1
LPG	6.96	9.86	10.97	8.94	9.35	9.6

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the space-heating expenditures of the space-heating fuel. Not included are: 1) the expenditures of the main space-heating fuel for uses other than space heating; 2) the expenditures of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the expenditures of other fuels that are used as secondary space-heating fuels.

³ Averages are for those households using each of the main space-heating fuels.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE2-12e. Space-Heating Energy Expenditures in U.S. Households by West Census Region, 1997

	Total U.S.	West Census Region			RSE Row Factors
		Total	Census Division		
			Mountain	Pacific	
RSE Column Factor:	0.5	1.0	1.7	1.1	
Million Households					
Total U.S. Households	101.5	21.8	6.2	15.6	NF
No Space Heating	0.8	0.5	Q	0.5	18.3
Space Heating	100.7	21.3	6.2	15.2	NF
Not Using a Major Fuel ¹	1.0	0.3	Q	0.2	28.7
Using a Major Fuel ¹	99.7	21.0	6.1	14.9	NF
For Main Space Heating	98.1	20.6	6.0	14.6	NF
For Secondary Space Heating Only	1.6	0.4	Q	0.3	20.4
Number of Households with Space Heating, Major Fuels Used (more than one may apply):					
Electricity	42.0	9.4	2.5	7.0	5.2
Natural Gas	54.5	12.8	4.0	8.8	3.5
Fuel Oil	9.8	0.3	Q	0.2	25.1
Kerosene	3.5	0.2	Q	Q	20.4
LPG	5.6	0.6	0.3	0.3	21.9
Billion Dollars					
Space-Heating Expenditures, Major Fuels Used:					
Electricity	8.56	1.70	0.39	1.30	6.1
Natural Gas	24.11	2.89	1.23	1.66	6.1
Fuel Oil	6.07	0.17	Q	0.13	32.2
Kerosene	0.50	0.04	Q	Q	29.3
LPG	2.79	0.28	0.16	0.12	24.9
Total	42.03	5.07	1.83	3.24	3.1
Dollars per Household					
Average Space-Heating Expenditures per Household					
Using a Major Fuel ¹	421	241	299	217	3.2
For Main Space Heating	425	243	301	219	3.3
For Secondary Space Heating Only	175	141	Q	121	18.3
Million Households					
Number of Households, Where the Main Space-Heating Fuel Is:					
Electricity	29.6	7.1	1.7	5.4	7.0
Natural Gas	53.5	12.7	4.0	8.7	3.6
Fuel Oil	9.5	0.2	Q	Q	23.5
Kerosene	1.0	Q	Q	Q	33.7
LPG	4.6	0.5	0.3	0.3	24.9
Other	2.6	0.7	0.2	0.5	18.9
No Space Heating	0.8	0.5	Q	0.5	18.3

See footnotes at end of table.

Table CE2-12e. Space-Heating Energy Expenditures in U.S. Households by West Census Region, 1997 (Continued)

	West Census Region				RSE Row Factors
	Total U.S.	Census Division			
		Total	Mountain	Pacific	
RSE Column Factor:	0.5	1.0	1.7	1.1	
Dollars per Household³					
Space-Heating Expenditures per Household,² Where the Main Space-Heating Fuel Is:					
Electricity	270	221	214	224	5.4
Natural Gas	446	225	306	188	4.4
Fuel Oil	629	676	Q	Q	15.9
Kerosene	350	Q	Q	Q	21.5
LPG	567	495	556	434	6.1
1997 Heating Degree-Days (HDD) per Household³					
1997 Heating Degree-Days per Household, Where the Main Space-Heating Fuel Is:					
Electricity	3,225	3,354	3,524	3,302	6.2
Natural Gas	4,710	3,136	5,262	2,157	4.5
Fuel Oil	5,707	5,258	Q	Q	7.3
Kerosene	4,959	Q	Q	Q	17.7
LPG	4,863	5,150	6,513	3,768	7.5
Average for All Households	4,368	3,300	4,849	2,664	3.4
Heated Square Footage (HSF) per Household³					
Heated Square Footage per Household,⁴ Where the Main Space-Heating Fuel Is:					
Electricity	1,468	1,277	1,333	1,260	3.2
Natural Gas	1,757	1,560	1,690	1,500	3.7
Fuel Oil	1,844	2,499	Q	Q	6.7
Kerosene	1,023	Q	Q	Q	8.2
LPG	1,676	1,446	1,441	1,452	9.3
Average for All Households	1,667	1,469	1,586	1,421	2.9
Space-Heating Intensity [Cents÷{HDD×(HSF÷1000)}]³					
Space-Heating Intensity, Where the Main Space-Heating Fuel Is:					
Electricity	5.70	5.17	4.56	5.38	6.2
Natural Gas	5.39	4.60	3.44	5.80	4.6
Fuel Oil	5.98	5.14	Q	Q	14.2
Kerosene	6.89	Q	Q	Q	19.5
LPG	6.96	6.65	5.92	7.93	14.3

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the space-heating expenditures of the space-heating fuel. Not included are: 1) the expenditures of the main space-heating fuel for uses other than space heating; 2) the expenditures of the main space-heating fuel where it is the secondary, and not the main, space-heating fuel, and; 3) the expenditures of other fuels that are used as secondary space-heating fuels.

³ Averages are for those households using each of the main space-heating fuels.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

1997 Consumption and Expenditures Tables

Electric Air-Conditioning Consumption Tables

(23 pages, 66 kb)

Contents	Pages
CE3-1c. Electric Air-Conditioning Energy Consumption in U.S. Households by Climate Zone, 1997	2
CE3-2c. Electric Air-Conditioning Energy Consumption in U.S. Households by Year of Construction, 1997	2
CE3-3c. Electric Air-Conditioning Energy Consumption in U.S. Households by Household Income, 1997	2
CE3-4c. Electric Air-Conditioning Energy Consumption in U.S. Households by Type of Housing Unit, 1997	2
CE3-5u. Electric Air-Conditioning Energy Consumption and Expenditures in U.S. Households by Household Demographics, 1997	2
CE3-6u. Electric Air-Conditioning Energy Consumption and Expenditures in U.S. Households by Usage Indicators, 1997	2
CE3-7c. Electric Air-Conditioning Energy Consumption in U.S. Households by Four Most Populated States, 1997	2
CE3-8c. Electric Air-Conditioning Energy Consumption in U.S. Households by Urban/Rural Location, 1997	2
CE3-9c. Electric Air-Conditioning Energy Consumption in U.S. Households by Northeast Census Region, 1997	2
CE3-10c. Electric Air-Conditioning Energy Consumption in U.S. Households by Midwest Census Region, 1997	2
CE3-11c. Electric Air-Conditioning Energy Consumption in U.S. Households by South Census Region, 1997	2
CE3-12c. Electric Air-Conditioning Energy Consumption in U.S. Households by West Census Region, 1997	2

These data are from the 1997 Residential Energy Consumption Survey (RECS) which provides information on the use of energy in residential housing units in the United States. The RECS is a national statistical survey that collects data for occupied primary housing units. RECS was first conducted in 1978; the sixth and most recent survey was conducted in 1997 RECS. The data were collected from a sample of 5,900 housing units statistically selected to represent the 101.5 million units in the United States. The 1997 data are available for the four Census regions, the nine Census divisions, and for the four most populous States--California, Florida, New York, and Texas.

Data provided here are in the public domain and may be reproduced without permission. Appropriate credit would be appreciated. A suggested citation is "U.S. Department of Energy, Energy Information Administration, *"A Look at Residential Energy Consumption in 1997."*

Electronic Products and Services

Users can view and download selected pages or entire reports, search for information, download data and analysis applications, and find out about new information products and services.

Contact: Robert Latta, Survey Manager (rlatta@eia.doe.gov)

World Wide Web: <http://www.eia.doe.gov/emeu/consumption>

Table CE3-1c. Electric Air-Conditioning Energy Consumption in U.S. Households by Climate Zone, 1997

	Climate Zone ¹						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factor:	0.5	1.9	1.1	0.9	1.2	0.9	
Million Households							
Total U.S. Households	101.5	9.3	28.0	22.5	19.5	22.2	8.2
No/Don't Use Air-Conditioning	28.8	4.1	9.8	4.9	7.5	2.6	9.8
Electric Air-Conditioning ²	72.6	5.2	18.2	17.6	12.0	19.6	8.4
Central Air-Conditioning ³	47.5	2.9	10.5	10.3	8.4	15.3	10.0
Room/Wall Air-Conditioning	25.2	2.3	7.7	7.3	3.6	4.3	11.2
Quadrillion Btu							
Electric Air-Conditioning Btu Consumption							
Total	0.42	0.01	0.05	0.07	0.07	0.22	11.0
Central Air-Conditioning	0.34	0.01	0.04	0.06	0.06	0.19	11.8
Room/Wall Air-Conditioning	0.07	(*)	0.01	0.02	0.01	0.03	13.7
Billion kWh							
Electric Air-Conditioning kWh Consumption							
Total	122	3	14	21	20	63	11.0
Central Air-Conditioning	101	3	11	16	17	54	11.8
Room/Wall Air-Conditioning	21	1	3	5	4	9	13.7
Million Btu per Household⁴							
Electric Air-Conditioning Btu Consumption per Household							
Electric Air-Conditioning	5.7	2.2	2.6	4.1	5.8	11.0	5.0
Central Air-Conditioning	7.2	3.0	3.5	5.4	6.8	12.1	4.7
Room/Wall Air-Conditioning	2.9	1.2	1.4	2.2	3.4	7.0	6.0
kWh per Household⁴							
Electric Air-Conditioning kWh Consumption per Household							
Electric Air-Conditioning	1,677	644	766	1,195	1,694	3,224	5.0
Central Air-Conditioning	2,123	885	1,022	1,580	1,998	3,547	4.7
Room/Wall Air-Conditioning	837	343	416	648	986	2,064	6.0
1997 Cooling Degree-Days (CDD) per Household⁴							
1997 Cooling Degree-Days per Household							
Total U.S. Households	1,274	464	590	988	1,310	2,735	4.1
No/Don't Use Air-Conditioning	868	418	487	769	1,054	2,647	7.1
Electric Air-Conditioning	1,435	500	645	1,048	1,470	2,746	3.5
Central Air-Conditioning	1,576	518	658	1,081	1,503	2,782	4.0
Room/Wall Air-Conditioning	1,169	477	628	1,001	1,393	2,619	3.9

See footnotes at end of table.

Table CE3-1c. Electric Air-Conditioning Energy Consumption in U.S. Households by Climate Zone, 1997 (Continued)

	Climate Zone ¹						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factor:	0.5	1.9	1.1	0.9	1.2	0.9	
Cooled Square Footage (CSF) per Household⁴							
Cooled Square Footage per Household⁵							
Electric Air-Conditioning	1,464	1,705	1,525	1,455	1,389	1,396	3.4
Central Air-Conditioning	1,823	2,314	2,091	1,891	1,690	1,574	3.1
Room/Wall Air-Conditioning	786	944	751	837	690	757	4.9
Air-Conditioning Intensity [kWh÷{CDD×(CSF÷1000)}]⁴							
Air-Conditioning Intensity							
Electric Air-Conditioning	0.80	0.76	0.78	0.78	0.83	0.84	2.9
Central Air-Conditioning	0.74	0.74	0.74	0.77	0.79	0.81	3.1
Room/Wall Air-Conditioning	0.91	0.76	0.88	0.77	1.03	1.04	4.5

¹ One of five climatically distinct areas, determined according to the 30-year average (1961-1990) of the annual heating and cooling degree-days. For this report, the heating or cooling degree-days are a measure of how cold or how hot a location is over a period of one year, relative to a base temperature of 65 degrees Fahrenheit. A household is assigned to a climate zone according to the 30-year average annual degree-days for an appropriate nearby weather station.

² The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

³ Includes 642,000 households using room/wall air-conditioners in addition to central air-conditioning. These room/wall air-conditioners are not included in the count of 25.2 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

⁴ Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

⁵ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

(*) = Value rounds to zero in the units displayed.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE3-2c. Electric Air-Conditioning Energy Consumption in U.S. Households by Year of Construction, 1997

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ¹	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.9	1.2	1.0	0.9	1.1	0.9	
Million Households								
Total U.S. Households	101.5	9.7	17.3	19.6	14.4	12.5	27.9	4.2
No/Don't Use Air-Conditioning	28.8	1.4	2.7	4.9	4.4	3.6	11.8	7.9
Electric Air-Conditioning ²	72.6	8.3	14.6	14.7	10.0	8.9	16.1	4.7
Central Air-Conditioning ³	47.5	7.5	12.9	10.8	6.5	4.6	5.2	6.2
Room/Wall Air-Conditioning	25.2	0.8	1.8	3.9	3.5	4.3	10.9	8.6
Quadrillion Btu								
Electric Air-Conditioning Btu Consumption								
Total	0.42	0.06	0.11	0.10	0.05	0.04	0.05	7.1
Central Air-Conditioning	0.34	0.06	0.10	0.08	0.04	0.03	0.03	8.3
Room/Wall Air-Conditioning	0.07	(*)	0.01	0.01	0.01	0.01	0.03	11.6
Billion kWh								
Electric Air-Conditioning kWh Consumption								
Total	122	18	32	28	16	12	16	7.1
Central Air-Conditioning	101	18	30	24	13	8	8	8.3
Room/Wall Air-Conditioning	21	1	2	4	3	4	8	11.6
Million Btu per Household⁴								
Electric Air-Conditioning Btu Consumption per Household								
Electric Air-Conditioning	5.7	7.4	7.4	6.5	5.4	4.8	3.3	5.3
Central Air-Conditioning	7.2	8.0	8.0	7.7	6.7	6.1	5.2	5.6
Room/Wall Air-Conditioning	2.9	2.7	3.1	3.3	3.1	3.3	2.4	9.0
kWh per Household⁴								
Electric Air-Conditioning kWh Consumption per Household								
Electric Air-Conditioning	1,677	2,181	2,160	1,911	1,592	1,393	975	5.3
Central Air-Conditioning	2,123	2,330	2,332	2,257	1,953	1,788	1,529	5.6
Room/Wall Air-Conditioning	837	782	901	955	911	970	713	9.0
1997 Cooling Degree-Days (CDD) per Household⁴								
1997 Cooling Degree-Days per Household								
Total U.S. Households	1,274	1,342	1,557	1,411	1,312	1,257	967	3.9
No/Don't Use Air-Conditioning	868	736	746	877	1,017	943	828	7.7
Electric Air-Conditioning	1,435	1,443	1,704	1,589	1,443	1,385	1,068	4.1
Central Air-Conditioning	1,576	1,478	1,788	1,689	1,558	1,399	1,135	4.9
Room/Wall Air-Conditioning	1,169	1,112	1,094	1,312	1,225	1,370	1,037	5.9

See footnotes at end of table.

Table CE3-2c. Electric Air-Conditioning Energy Consumption in U.S. Households by Year of Construction, 1997 (Continued)

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ¹	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.9	1.2	1.0	0.9	1.1	0.9	
Cooled Square Footage (CSF) per Household⁴								
Cooled Square Footage per Household⁵								
Electric Air-Conditioning	1,464	2,001	1,643	1,436	1,412	1,321	1,158	3.0
Central Air-Conditioning	1,823	2,134	1,770	1,708	1,730	1,786	1,895	2.8
Room/Wall Air-Conditioning	786	760	717	688	811	825	810	5.6
Air-Conditioning Intensity [kWh÷(CDD×(CSF÷1000))]⁴								
Air-Conditioning Intensity								
Electric Air-Conditioning	0.80	0.76	0.77	0.84	0.78	0.76	0.79	3.1
Central Air-Conditioning	0.74	0.74	0.74	0.78	0.72	0.72	0.71	3.3
Room/Wall Air-Conditioning	0.91	0.93	1.15	1.06	0.92	0.86	0.85	6.3

¹ New construction for 1997 includes only those housing units built and occupied between January and the April-August period when the household interviews were conducted.

² The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

³ Includes 642,000 households using room/wall air-conditioners in addition to central air-conditioning. These room/wall air-conditioners are not included in the count of 25.2 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

⁴ Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

⁵ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage. (*) = Value rounds to zero in the units displayed.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE3-3c. Electric Air-Conditioning Energy Consumption in U.S. Households by Household Income, 1997

	Total	1997 Household Income				Below Poverty Line	Eligible for Federal Assistance ¹	RSE Row Factors
		Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.6	1.7	1.0	0.8	0.9	1.4	1.0	
Million Households								
Total U.S. Households	101.5	13.3	29.1	31.1	27.9	14.6	34.1	2.7
No/Don't Use Air-Conditioning	28.8	5.2	9.9	8.0	5.7	6.4	13.2	5.2
Electric Air-Conditioning ²	72.6	8.1	19.3	23.1	22.2	8.3	20.9	3.6
Central Air-Conditioning ³	47.5	3.6	10.9	15.6	17.3	3.7	10.5	5.4
Room/Wall Air-Conditioning	25.2	4.4	8.4	7.5	4.9	4.6	10.4	5.7
Quadrillion Btu								
Electric Air-Conditioning Btu Consumption								
Total	0.42	0.04	0.10	0.12	0.16	0.04	0.10	6.0
Central Air-Conditioning	0.34	0.02	0.07	0.10	0.15	0.03	0.07	7.6
Room/Wall Air-Conditioning	0.07	0.01	0.02	0.02	0.01	0.02	0.03	8.9
Billion kWh								
Electric Air-Conditioning kWh Consumption								
Total	122	11	28	35	48	12	29	6.0
Central Air-Conditioning	101	7	21	29	44	7	20	7.6
Room/Wall Air-Conditioning	21	4	7	6	4	4	9	8.9
Million Btu per Household⁴								
Electric Air-Conditioning Btu Consumption per Household								
Electric Air-Conditioning	5.7	4.6	5.0	5.1	7.3	4.9	4.8	4.8
Central Air-Conditioning	7.2	6.5	6.7	6.3	8.6	6.9	6.5	5.4
Room/Wall Air-Conditioning	2.9	3.1	3.0	2.6	2.9	3.3	3.1	6.8
kWh per Household⁴								
Electric Air-Conditioning kWh Consumption per Household								
Electric Air-Conditioning	1,677	1,354	1,478	1,497	2,154	1,433	1,404	4.8
Central Air-Conditioning	2,123	1,894	1,950	1,853	2,522	2,035	1,897	5.4
Room/Wall Air-Conditioning	837	910	867	754	848	959	908	6.8
1997 Cooling Degree-Days (CDD) per Household⁴								
1997 Cooling Degree-Days per Household								
Total U.S. Households	1,274	1,392	1,339	1,197	1,235	1,379	1,322	3.1
No/Don't Use Air-Conditioning	868	984	921	808	752	1,003	961	5.5
Electric Air-Conditioning	1,435	1,657	1,553	1,332	1,359	1,666	1,551	3.2
Central Air-Conditioning	1,576	1,829	1,805	1,482	1,464	1,894	1,737	4.2
Room/Wall Air-Conditioning	1,169	1,515	1,227	1,020	983	1,486	1,363	4.0

See footnotes at end of table.

Table CE3-3c. Electric Air-Conditioning Energy Consumption in U.S. Households by Household Income, 1997 (Continued)

	Total	1997 Household Income				Below Poverty Line	Eligible for Federal Assistance ¹	RSE Row Factors
		Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.6	1.7	1.0	0.8	0.9	1.4	1.0	
Cooled Square Footage (CSF) per Household⁴								
Cooled Square Footage per Household⁵								
Electric Air-Conditioning	1,464	884	1,117	1,449	1,990	921	1,055	2.9
Central Air-Conditioning	1,823	1,274	1,425	1,717	2,284	1,346	1,417	3.2
Room/Wall Air-Conditioning	786	563	718	889	945	586	691	3.7
Air-Conditioning Intensity [kWh÷(CDD×(CSF÷1000))]⁴								
Air-Conditioning Intensity								
Electric Air-Conditioning	0.80	0.92	0.85	0.78	0.80	0.93	0.86	2.9
Central Air-Conditioning	0.74	0.81	0.76	0.73	0.75	0.80	0.77	3.4
Room/Wall Air-Conditioning	0.91	1.07	0.98	0.83	0.91	1.10	0.96	4.7

¹ Below 150 percent of poverty line or 60 percent of median State income.

² The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

³ Includes 642,000 households using room/wall air-conditioners in addition to central air-conditioning. These room/wall air-conditioners are not included in the count of 25.2 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

⁴ Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

⁵ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE3-4c. Electric Air-Conditioning Energy Consumption in U.S. Households by Type of Housing Unit, 1997

	Type of Housing Unit					RSE Row Factors
	Total	Single-Family	Multifamily		Mobile Home	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.5	0.5	1.7	1.4	1.5	
Million Households						
Total U.S. Households	101.5	73.7	5.6	15.8	6.3	4.1
No/Don't Use Air-Conditioning	28.8	19.9	2.2	4.9	1.8	7.6
Electric Air-Conditioning ¹	72.6	53.8	3.4	10.9	4.5	4.8
Central Air-Conditioning ²	47.5	36.8	1.6	6.5	2.6	7.0
Room/Wall Air-Conditioning	25.2	17.1	1.8	4.4	1.9	7.8
Quadrillion Btu						
Electric Air-Conditioning Btu Consumption						
Total	0.42	0.33	0.01	0.04	0.03	7.5
Central Air-Conditioning	0.34	0.28	0.01	0.03	0.02	8.6
Room/Wall Air-Conditioning	0.07	0.05	(*)	0.01	0.01	9.8
Billion kWh						
Electric Air-Conditioning kWh Consumption						
Total	122	97	3	12	10	7.5
Central Air-Conditioning	101	82	2	10	7	8.6
Room/Wall Air-Conditioning	21	15	1	2	3	9.8
Million Btu per Household³						
Electric Air-Conditioning Btu Consumption per Household						
Electric Air-Conditioning	5.7	6.1	3.3	3.7	7.5	5.7
Central Air-Conditioning	7.2	7.6	5.1	5.0	9.3	5.9
Room/Wall Air-Conditioning	2.9	3.0	1.7	1.8	5.1	7.1
kWh per Household³						
Electric Air-Conditioning kWh Consumption per Household						
Electric Air-Conditioning	1,677	1,798	957	1,086	2,204	5.7
Central Air-Conditioning	2,123	2,221	1,496	1,474	2,716	5.9
Room/Wall Air-Conditioning	837	886	484	519	1,488	7.1
1997 Cooling Degree-Days (CDD) per Household³						
1997 Cooling Degree-Days per Household						
Total U.S. Households	1,274	1,257	1,084	1,418	1,282	4.6
No/Don't Use Air-Conditioning	868	838	779	1,001	942	7.4
Electric Air-Conditioning	1,435	1,411	1,280	1,607	1,420	4.7
Central Air-Conditioning	1,576	1,520	1,591	1,907	1,545	5.6
Room/Wall Air-Conditioning	1,169	1,178	1,007	1,167	1,245	4.9

See footnotes at end of table.

Table CE3-4c. Electric Air-Conditioning Energy Consumption in U.S. Households by Type of Housing Unit, 1997 (Continued)

	Type of Housing Unit					RSE Row Factors
	Total	Single-Family	Multifamily		Mobile Home	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.5	0.5	1.7	1.4	1.5	
Cooled Square Footage (CSF) per Household³						
Cooled Square Footage per Household⁴						
Electric Air-Conditioning	1,464	1,699	770	747	904	2.7
Central Air-Conditioning	1,823	2,063	1,035	937	1,125	2.6
Room/Wall Air-Conditioning	786	915	537	470	594	3.6
Air-Conditioning Intensity [kWh÷{CDD×(CSF÷1000)}]³						
Air-Conditioning Intensity						
Electric Air-Conditioning	0.80	0.75	0.97	0.90	1.72	2.6
Central Air-Conditioning	0.74	0.71	0.91	0.82	1.56	2.8
Room/Wall Air-Conditioning	0.91	0.82	0.90	0.95	2.01	4.9

¹ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

² Includes 642,000 households using room/wall air-conditioners in addition to central air-conditioning. These room/wall air-conditioners are not included in the count of 25.2 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

³ Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage. (*) = Value rounds to zero in the units displayed.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE3-5u. Electric Air-Conditioning Energy Consumption and Expenditures in U.S. Households by Household Demographics, 1997

Household Demographics	Electric Air-Conditioning Energy					RSE Row Factors
	Households (millions)	Total		Per Household		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	
RSE Column Factor:	0.8	1.2	1.2	0.9	0.9	
Total	72.6	0.42	10.20	5.7	140	2.6
Household Size						
1 Person	17.7	0.07	1.83	4.1	104	3.9
2 Persons	24.6	0.14	3.52	5.8	143	4.1
3 Persons	12.2	0.08	1.89	6.4	155	4.4
4 Persons	11.2	0.07	1.74	6.4	155	5.4
5 Persons	4.4	0.03	0.71	6.6	162	7.3
6 or More Persons	2.5	0.02	0.50	8.2	199	11.2
1997 Household Income Category						
Less than \$5,000	2.0	0.01	0.22	4.4	107	10.4
\$5,000 to \$9,999	6.1	0.03	0.70	4.7	115	12.4
\$10,000 to \$14,999	6.3	0.03	0.74	4.8	118	8.0
\$15,000 to \$19,999	7.1	0.04	0.90	5.1	128	7.6
\$20,000 to \$24,999	5.9	0.03	0.74	5.2	126	6.3
\$25,000 to \$34,999	11.4	0.05	1.33	4.8	116	4.2
\$35,000 to \$49,999	11.7	0.06	1.53	5.4	131	4.5
\$50,000 to \$74,999	13.4	0.09	2.15	6.5	161	5.0
\$75,000 or More	8.8	0.08	1.89	8.6	215	6.3
Below Poverty Line						
100 Percent	8.3	0.04	1.00	4.9	120	7.9
125 Percent	11.6	0.06	1.42	5.0	123	7.7
150 Percent	16.2	0.08	2.03	5.1	125	6.0
Eligible for Federal Assistance¹	20.9	0.10	2.48	4.8	119	5.4
Age of Householder						
Under 25 Years	3.5	0.02	0.41	4.8	119	8.1
25 to 34 Years	12.7	0.07	1.61	5.2	127	4.2
35 to 44 Years	16.4	0.11	2.56	6.4	156	4.4
45 to 59 Years	18.8	0.13	3.08	6.8	164	4.2
60 Years and Over	21.3	0.10	2.53	4.7	119	5.0
Race of Householder						
White	58.2	0.34	8.15	5.8	140	2.9
Black	9.0	0.05	1.27	5.7	141	6.3
Other ²	5.4	0.03	0.78	5.3	145	12.3
Householder of Hispanic Descent						
Yes	5.2	0.04	0.95	7.2	183	8.5
No	67.4	0.38	9.25	5.6	137	2.8

¹ Below 150 percent of poverty line or 60 percent of median State income.

² Includes 2.7 million householders who described themselves as Hispanic rather than White, Black, or other.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE3-6u. Electric Air-Conditioning Energy Consumption and Expenditures in U.S. Households by Usage Indicators, 1997

Usage Indicators	Electric Air-Conditioning Energy					RSE Row Factors
	Households (million)	Total		Per Household		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	
	RSE Column Factor:	0.9	1.3	1.2	0.8	
Total	72.6	0.42	10.20	5.7	140	2.6
Type of Air-Conditioning¹						
Electric Air-Conditioning	72.6	0.42	10.20	5.7	140	2.6
Central Air-Conditioning	47.5	0.34	8.29	7.2	175	3.0
Room Air-Conditioning	25.2	0.07	1.91	2.9	76	4.7
Percentage of Rooms Air-Conditioned in Summer 1997						
100%	50.2	0.35	8.51	7.0	169	3.1
50% to 99%	11.4	0.05	1.13	4.0	99	6.0
25% to 49%	7.0	0.01	0.38	2.0	55	6.8
1% to 24%	4.0	0.01	0.17	1.5	43	8.1
Household Size						
1 Person	17.7	0.07	1.83	4.1	104	3.9
2 Persons	24.6	0.14	3.52	5.8	143	4.1
3 Persons	12.2	0.08	1.89	6.4	155	4.4
4 Persons	11.2	0.07	1.74	6.4	155	5.4
5 Persons	4.4	0.03	0.71	6.6	162	7.3
6 or More Persons	2.5	0.02	0.50	8.2	199	11.2
Someone Home All Day						
Yes	36.2	0.22	5.31	6.0	147	3.9
No	36.5	0.20	4.89	5.5	134	3.4
Large Tree(s) that Shades the Home						
Yes	35.5	0.23	5.48	6.4	154	4.2
No	37.2	0.19	4.72	5.1	127	3.9
Adequacy of Insulation						
Well Insulated	29.7	0.18	4.39	6.1	148	4.0
Adequately Insulated	31.5	0.18	4.53	5.9	144	3.4
Poorly Insulated	11.2	0.05	1.25	4.4	112	5.6
Not Insulated	0.2	(*)	0.02	3.9	103	30.2
Cooling Degree-Days (CDD)-1997 Use Central Air-Conditioning						
2,000 or More	12.2	0.16	3.92	13.4	322	6.8
1,000 to 1,999	18.3	0.12	2.90	6.8	158	5.6
500 to 999	12.7	0.05	1.23	3.7	97	6.9
Fewer than 500	4.2	0.01	0.24	2.2	56	13.1
Use Room Air-Conditioner						
2,000 or More	3.1	0.03	0.63	8.3	202	11.7
1,000 to 1,999	8.7	0.03	0.70	3.1	81	6.5
500 to 999	9.8	0.02	0.48	1.6	49	6.9
Fewer than 500	3.5	(*)	0.09	1.0	25	14.9
Air-Conditioning Use Summer 1997²						
Central Air-Conditioning						
Only a Few Times	12.6	0.04	1.07	3.2	85	5.0
Quite a Bit	10.5	0.07	1.64	6.2	157	4.8
All Summer	24.4	0.24	5.58	9.8	229	3.8

See footnotes at end of table.

Table CE3-6u. Electric Air-Conditioning Energy Consumption and Expenditures in U.S. Households by Usage Indicators, 1997 (Continued)

Usage Indicators	Electric Air-Conditioning Energy					RSE Row Factors
	Households (million)	Total		Per Household		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	
	RSE Column Factor:	0.9	1.3	1.2	0.8	
Room Air-Conditioners						
Only a Few Times	13.2	0.02	0.66	1.7	50	4.6
Quite a Bit	6.5	0.02	0.42	2.4	65	6.8
All Summer	5.5	0.03	0.83	6.1	151	7.9
Electric Air-Conditioning Paid by Household						
Central Air-Conditioning						
Yes	46.2	0.34	8.13	7.3	176	3.0
No	1.1	0.01	0.14	5.8	130	18.4
Room Air-Conditioner						
Yes	23.4	0.07	1.80	2.9	77	4.9
No	1.7	(*)	0.10	2.1	58	19.2
Age of Air-Conditioners² (excludes systems for more than one housing unit)						
Central Air-Conditioner						
Less than 5 Years	13.1	0.09	2.12	6.8	162	6.4
5 to 9 Years	14.1	0.11	2.61	7.6	185	5.9
10 to 19 Years	12.8	0.10	2.38	7.9	187	5.3
20 or More Years	3.9	0.02	0.61	6.1	154	8.4
Don't Know	2.7	0.02	0.46	7.1	169	11.0
Room Air-Conditioner						
Less than 5 Years	8.7	0.03	0.71	3.1	81	6.6
5 to 9 Years	6.9	0.02	0.52	2.8	76	7.4
10 or 19 Years	5.7	0.02	0.43	2.9	76	7.5
20 or More Years	2.0	(*)	0.12	2.3	62	10.3
Don't Know	1.9	(*)	0.12	2.2	62	13.6
Average Cost of Electricity (cents per kWh)						
Central Air-Conditioning						
Less than 6	4.1	0.03	0.46	7.1	113	11.5
6 to 8.99	28.4	0.25	5.73	8.8	202	4.3
9 or More	15.0	0.06	2.10	4.3	140	7.2
Room Air-Conditioning						
Less than 6	1.7	(*)	0.08	2.8	44	17.7
6 to 8.99	10.0	0.04	1.01	4.4	101	8.0
9 or More	13.4	0.02	0.82	1.7	61	5.9

¹ Includes 642,000 households using room/wall air-conditioners in addition to central air-conditioning. These room/wall air-conditioners are not included in the count of 25.2 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

² If a household has both a central and room air-conditioner then the usage and age of the equipment is presented only for the central unit.

(*) = Value rounds to zero in the units displayed.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE3-7c. Electric Air-Conditioning Energy Consumption in U.S. Households by Four Most Populated States, 1997

	Four Most Populated States					RSE Row Factors
	Total U.S.	New York	California	Texas	Florida	
	0.4	1.4	1.7	1.1	1.1	
Million Households						
Total U.S. Households	101.5	6.8	11.5	7.0	5.9	NF
No/Don't Use Air-Conditioning	28.8	2.6	6.9	0.6	0.3	11.5
Electric Air-Conditioning ¹	72.6	4.2	4.6	6.3	5.6	3.3
Central Air-Conditioning ²	47.5	1.3	3.2	4.8	4.9	5.4
Room/Wall Air-Conditioning	25.2	3.0	1.4	1.6	0.7	10.7
Quadrillion Btu						
Electric Air-Conditioning Btu Consumption						
Total	0.42	0.01	0.02	0.07	0.07	10.0
Central Air-Conditioning	0.34	(*)	0.01	0.06	0.07	10.1
Room/Wall Air-Conditioning	0.07	(*)	(*)	0.01	0.01	17.5
Billion kWh						
Electric Air-Conditioning kWh Consumption						
Total	122	2	5	22	21	10.0
Central Air-Conditioning	101	1	4	18	20	10.1
Room/Wall Air-Conditioning	21	1	1	3	2	17.5
Million Btu per Household³						
Electric Air-Conditioning Btu Consumption per Household						
Electric Air-Conditioning	5.7	1.8	3.6	11.6	13.1	7.8
Central Air-Conditioning	7.2	2.4	4.4	13.0	13.8	8.7
Room/Wall Air-Conditioning	2.9	1.5	1.9	7.5	8.5	10.7
kWh per Household³						
Electric Air-Conditioning kWh Consumption per Household						
Electric Air-Conditioning	1,677	518	1,065	3,408	3,842	7.8
Central Air-Conditioning	2,123	716	1,293	3,809	4,042	8.7
Room/Wall Air-Conditioning	837	434	546	2,192	2,503	10.7
1997 Cooling Degree-Days (CDD) per Household³						
1997 Cooling Degree-Days per Household						
Total U.S. Households	1,274	775	1,132	2,494	3,547	5.7
No/Don't Use Air-Conditioning	868	763	968	2,125	3,567	8.6
Electric Air-Conditioning	1,435	782	1,380	2,530	3,546	5.0
Central Air-Conditioning	1,576	585	1,427	2,536	3,524	6.6
Room/Wall Air-Conditioning	1,169	865	1,274	2,511	3,694	5.1

See footnotes at end of table.

Table CE3-7c. Electric Air-Conditioning Energy Consumption in U.S. Households by Four Most Populated States, 1997 (Continued)

	Total U.S.	Four Most Populated States				RSE Row Factors
		New York	California	Texas	Florida	
RSE Column Factor:	0.4	1.4	1.7	1.1	1.1	
Cooled Square Footage (CSF) per Household³						
Cooled Square Footage per Household⁴						
Electric Air-Conditioning	1,464	1,081	1,297	1,402	1,523	5.4
Central Air-Conditioning	1,823	1,953	1,622	1,617	1,627	5.9
Room/Wall Air-Conditioning	786	713	556	748	822	7.8
Air-Conditioning Intensity [kWh÷{CDD×(CSF÷1000)}]³						
Air-Conditioning Intensity						
Electric Air-Conditioning	0.80	0.61	0.59	0.96	0.71	2.7
Central Air-Conditioning	0.74	0.63	0.56	0.93	0.70	3.5
Room/Wall Air-Conditioning	0.91	0.70	0.77	1.17	0.82	5.6

¹ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

² Includes 642,000 households using room/wall air-conditioners in addition to central air-conditioning. These room/wall air-conditioners are not included in the count of 25.2 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

³ Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

(*) = Value rounds to zero in the units displayed.

NF = No applicable RSE row factor.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE3-8c. Electric Air-Conditioning Energy Consumption in U.S. Households by Urban/Rural Location, 1997

	Total	Urban/Rural Location ¹				RSE Row Factors
		City	Town	Suburbs	Rural	
RSE Column Factor:	0.6	0.8	1.5	1.2	1.2	
Million Households						
Total U.S. Households	101.5	48.2	18.2	18.6	16.5	4.1
No/Don't Use Air-Conditioning	28.8	15.1	5.1	3.7	4.9	7.0
Electric Air-Conditioning ²	72.6	33.1	13.1	14.8	11.5	4.4
Central Air-Conditioning ³	47.5	20.5	7.8	11.9	7.2	5.5
Room/Wall Air-Conditioning	25.2	12.6	5.4	2.9	4.3	6.9
Quadrillion Btu						
Electric Air-Conditioning Btu Consumption						
Total	0.42	0.18	0.06	0.10	0.07	6.3
Central Air-Conditioning	0.34	0.15	0.05	0.10	0.05	7.0
Room/Wall Air-Conditioning	0.07	0.04	0.01	0.01	0.01	9.7
Billion kWh						
Electric Air-Conditioning kWh Consumption						
Total	122	54	18	31	20	6.3
Central Air-Conditioning	101	43	14	28	15	7.0
Room/Wall Air-Conditioning	21	11	4	2	4	9.7
Million Btu per Household⁴						
Electric Air-Conditioning Btu Consumption per Household						
Electric Air-Conditioning	5.7	5.5	4.6	7.0	5.9	4.5
Central Air-Conditioning	7.2	7.2	6.0	8.1	7.3	4.6
Room/Wall Air-Conditioning	2.9	2.9	2.5	2.7	3.4	7.1
kWh per Household⁴						
Electric Air-Conditioning kWh Consumption per Household						
Electric Air-Conditioning	1,677	1,624	1,339	2,066	1,715	4.5
Central Air-Conditioning	2,123	2,106	1,766	2,378	2,131	4.6
Room/Wall Air-Conditioning	837	841	719	785	1,009	7.1
1997 Cooling Degree-Days (CDD) per Household⁴						
1997 Cooling Degree-Days per Household						
Total U.S. Households	1,274	1,401	1,071	1,293	1,105	3.8
No/Don't Use Air-Conditioning	868	993	690	818	705	6.7
Electric Air-Conditioning	1,435	1,586	1,219	1,412	1,276	3.8
Central Air-Conditioning	1,576	1,794	1,362	1,484	1,340	4.4
Room/Wall Air-Conditioning	1,169	1,248	1,011	1,118	1,166	4.9

See footnotes at end of table.

Table CE3-8c. Electric Air-Conditioning Energy Consumption in U.S. Households by Urban/Rural Location, 1997 (Continued)

	Total	Urban/Rural Location ¹				RSE Row Factors
		City	Town	Suburbs	Rural	
RSE Column Factor:	0.6	0.8	1.5	1.2	1.2	
Cooled Square Footage (CSF) per Household⁴						
Cooled Square Footage per Household⁵						
Electric Air-Conditioning	1,464	1,295	1,429	1,832	1,514	2.7
Central Air-Conditioning	1,823	1,653	1,823	2,068	1,900	2.5
Room/Wall Air-Conditioning	786	713	856	863	859	4.2
Air-Conditioning Intensity [kWh÷{CDD×(CSF÷1000)}]⁴						
Air-Conditioning Intensity						
Electric Air-Conditioning	0.80	0.79	0.77	0.80	0.89	2.5
Central Air-Conditioning	0.74	0.71	0.71	0.78	0.84	2.6
Room/Wall Air-Conditioning	0.91	0.95	0.83	0.81	1.01	4.9

¹ Based on the household respondent's description rather than the Federal Government definition.

² The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

³ Includes 642,000 households using room/wall air-conditioners in addition to central air-conditioning. These room/wall air-conditioners are not included in the count of 25.2 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

⁴ Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

⁵ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE3-9c. Electric Air-Conditioning Energy Consumption in U.S. Households by Northeast Census Region, 1997

	Northeast Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Middle Atlantic	New England	
RSE Column Factor:	0.5	1.0	1.1	1.9	
Million Households					
Total U.S. Households	101.5	19.7	14.4	5.3	NF
No/Don't Use Air-Conditioning	28.8	7.6	4.7	2.8	6.9
Electric Air-Conditioning ¹	72.6	12.2	9.7	2.5	4.2
Central Air-Conditioning ²	47.5	4.4	4.0	0.4	11.2
Room/Wall Air-Conditioning	25.2	7.8	5.7	2.1	7.4
Quadrillion Btu					
Electric Air-Conditioning Btu Consumption					
Total	0.42	0.02	0.02	(*)	7.4
Central Air-Conditioning	0.34	0.01	0.01	(*)	11.4
Room/Wall Air-Conditioning	0.07	0.01	0.01	(*)	9.8
Billion kWh					
Electric Air-Conditioning kWh Consumption					
Total	122	7	6	1	7.4
Central Air-Conditioning	101	4	4	(*)	11.4
Room/Wall Air-Conditioning	21	3	2	1	9.8
Million Btu per Household³					
Electric Air-Conditioning Btu Consumption per Household					
Electric Air-Conditioning	5.7	2.0	2.2	1.5	5.0
Central Air-Conditioning	7.2	3.2	3.3	2.7	7.2
Room/Wall Air-Conditioning	2.9	1.4	1.4	1.3	5.1
kWh per Household³					
Electric Air-Conditioning kWh Consumption per Household					
Electric Air-Conditioning	1,677	599	640	438	5.0
Central Air-Conditioning	2,123	938	954	784	7.2
Room/Wall Air-Conditioning	837	409	422	370	5.1
1997 Cooling Degree-Days (CDD) per Household³					
1997 Cooling Degree-Days per Household					
Total U.S. Households	1,274	688	743	537	3.9
No/Don't Use Air-Conditioning	868	627	719	473	6.5
Electric Air-Conditioning	1,435	725	755	609	2.8
Central Air-Conditioning	1,576	673	679	614	4.8
Room/Wall Air-Conditioning	1,169	755	808	608	2.8

See footnotes at end of table.

Table CE3-9c. Electric Air-Conditioning Energy Consumption in U.S. Households by Northeast Census Region, 1997 (Continued)

	Northeast Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Middle Atlantic	New England	
RSE Column Factor:	0.5	1.0	1.1	1.9	
Cooled Square Footage (CSF) per Household³					
Cooled Square Footage per Household⁴					
Electric Air-Conditioning	1,464	1,271	1,323	1,070	5.0
Central Air-Conditioning	1,823	2,158	2,148	2,262	5.2
Room/Wall Air-Conditioning	786	774	751	836	5.0
Air-Conditioning Intensity [kWh÷(CDD×(CSF÷1000))]³					
Air-Conditioning Intensity					
Electric Air-Conditioning	0.80	0.65	0.64	0.67	2.4
Central Air-Conditioning	0.74	0.65	0.65	0.56	4.5
Room/Wall Air-Conditioning	0.91	0.70	0.70	0.73	3.5

¹ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

² Includes 642,000 households using room/wall air-conditioners in addition to central air-conditioning. These room/wall air-conditioners are not included in the count of 25.2 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

³ Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

(*) = Value rounds to zero in the units displayed.

NF = No applicable RSE row factor.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE3-10c. Electric Air-Conditioning Energy Consumption in U.S. Households by Midwest Census Region, 1997

	Midwest Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			East North Central	West North Central	
	0.6	0.9	1.2	1.6	
RSE Column Factor:					
Million Households					
Total U.S. Households	101.5	24.1	16.9	7.2	NF
No/Don't Use Air-Conditioning	28.8	5.5	4.6	0.9	8.0
Electric Air-Conditioning ¹	72.6	18.6	12.4	6.3	2.2
Central Air-Conditioning ²	47.5	12.3	8.0	4.3	4.2
Room/Wall Air-Conditioning	25.2	6.3	4.3	2.0	8.1
Quadrillion Btu					
Electric Air-Conditioning Btu Consumption					
Total	0.42	0.06	0.04	0.03	5.9
Central Air-Conditioning	0.34	0.05	0.03	0.02	7.0
Room/Wall Air-Conditioning	0.07	0.01	0.01	(*)	9.7
Billion kWh					
Electric Air-Conditioning kWh Consumption					
Total	122	18	11	7	5.9
Central Air-Conditioning	101	15	9	6	7.0
Room/Wall Air-Conditioning	21	3	2	1	9.7
Million Btu per Household³					
Electric Air-Conditioning Btu Consumption per Household					
Electric Air-Conditioning	5.7	3.3	3.0	4.1	5.0
Central Air-Conditioning	7.2	4.2	3.7	5.0	4.5
Room/Wall Air-Conditioning	2.9	1.7	1.5	1.9	6.6
kWh per Household³					
Electric Air-Conditioning kWh Consumption per Household					
Electric Air-Conditioning	1,677	978	870	1,191	5.0
Central Air-Conditioning	2,123	1,228	1,096	1,474	4.5
Room/Wall Air-Conditioning	837	486	447	571	6.6
1997 Cooling Degree-Days (CDD) per Household³					
1997 Cooling Degree-Days per Household					
Total U.S. Households	1,274	704	637	862	4.2
No/Don't Use Air-Conditioning	868	592	563	739	4.0
Electric Air-Conditioning	1,435	737	664	880	4.5
Central Air-Conditioning	1,576	754	670	911	4.9
Room/Wall Air-Conditioning	1,169	703	653	811	4.8

See footnotes at end of table.

Table CE3-10c. Electric Air-Conditioning Energy Consumption in U.S. Households by Midwest Census Region, 1997 (Continued)

	Midwest Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			East North Central	West North Central	
RSE Column Factor:	0.6	0.9	1.2	1.6	
Cooled Square Footage (CSF) per Household³					
Cooled Square Footage per Household⁴					
Electric Air-Conditioning	1,464	1,701	1,671	1,758	3.2
Central Air-Conditioning	1,823	2,137	2,132	2,145	3.0
Room/Wall Air-Conditioning	786	843	813	909	5.5
Air-Conditioning Intensity [kWh÷(CDD×(CSF÷1000))]³					
Air-Conditioning Intensity					
Electric Air-Conditioning	0.80	0.78	0.78	0.77	2.5
Central Air-Conditioning	0.74	0.76	0.77	0.75	2.3
Room/Wall Air-Conditioning	0.91	0.82	0.84	0.77	5.8

¹ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

² Includes 642,000 households using room/wall air-conditioners in addition to central air-conditioning. These room/wall air-conditioners are not included in the count of 25.2 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

³ Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

(*) = Value rounds to zero in the units displayed.

NF = No applicable RSE row factor.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE3-11c. Electric Air-Conditioning Energy Consumption in U.S. Households by South Census Region, 1997

	South Census Region					RSE Row Factors
	Total U.S.	Census Division			West South Central	
		Total	South Atlantic	East South Central		
RSE Column Factor:	0.6	0.8	1.1	1.4	1.3	
Million Households						
Total U.S. Households	101.5	35.9	18.7	6.3	10.8	NF
No/Don't Use Air-Conditioning	28.8	2.7	1.5	0.4	0.8	11.5
Electric Air-Conditioning ¹	72.6	33.2	17.2	6.0	10.0	1.6
Central Air-Conditioning ²	47.5	24.9	13.3	4.2	7.4	3.2
Room/Wall Air-Conditioning	25.2	8.3	3.9	1.8	2.6	6.7
Quadrillion Btu						
Electric Air-Conditioning Btu Consumption						
Total	0.42	0.29	0.14	0.04	0.11	4.9
Central Air-Conditioning	0.34	0.25	0.12	0.03	0.09	5.3
Room/Wall Air-Conditioning	0.07	0.04	0.02	0.01	0.02	9.6
Billion kWh						
Electric Air-Conditioning kWh Consumption						
Total	122	85	41	12	32	4.9
Central Air-Conditioning	101	72	35	10	26	5.3
Room/Wall Air-Conditioning	21	13	5	2	6	9.6
Million Btu per Household³						
Electric Air-Conditioning Btu Consumption per Household						
Electric Air-Conditioning	5.7	8.8	8.1	7.0	11.0	4.5
Central Air-Conditioning	7.2	9.9	9.1	8.3	12.2	4.2
Room/Wall Air-Conditioning	2.9	5.4	4.5	4.1	7.4	7.1
kWh per Household³						
Electric Air-Conditioning kWh Consumption per Household						
Electric Air-Conditioning	1,677	2,566	2,363	2,064	3,214	4.5
Central Air-Conditioning	2,123	2,899	2,665	2,426	3,589	4.2
Room/Wall Air-Conditioning	837	1,571	1,329	1,207	2,170	7.1
1997 Cooling Degree-Days (CDD) per Household³						
1997 Cooling Degree-Days per Household						
Total U.S. Households	1,274	2,044	2,023	1,518	2,387	4.3
No/Don't Use Air-Conditioning	868	1,840	1,758	1,481	2,149	7.6
Electric Air-Conditioning	1,435	2,060	2,046	1,520	2,406	4.2
Central Air-Conditioning	1,576	2,112	2,137	1,529	2,399	4.5
Room/Wall Air-Conditioning	1,169	1,905	1,737	1,500	2,425	4.7

See footnotes at end of table.

Table CE3-11c. Electric Air-Conditioning Energy Consumption in U.S. Households by South Census Region, 1997 (Continued)

	South Census Region					RSE Row Factors
	Total U.S.	Census Division			RSE Row Factors	
		Total	South Atlantic	East South Central		
RSE Column Factor:	0.6	0.8	1.1	1.4	1.3	
Cooled Square Footage (CSF) per Household³						
Cooled Square Footage per Household⁴						
Electric Air-Conditioning	1,464	1,443	1,496	1,407	1,375	2.6
Central Air-Conditioning	1,823	1,659	1,695	1,679	1,584	2.8
Room/Wall Air-Conditioning	786	796	813	765	791	4.3
Air-Conditioning Intensity [kWh÷{CDD×(CSF÷1000)}]³						
Air-Conditioning Intensity						
Electric Air-Conditioning	0.80	0.86	0.77	0.97	0.97	1.8
Central Air-Conditioning	0.74	0.83	0.74	0.95	0.94	1.9
Room/Wall Air-Conditioning	0.91	1.04	0.94	1.05	1.13	4.0

¹ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

² Includes 642,000 households using room/wall air-conditioners in addition to central air-conditioning. These room/wall air-conditioners are not included in the count of 25.2 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

³ Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage. NF = No applicable RSE row factor.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE3-12c. Electric Air-Conditioning Energy Consumption in U.S. Households by West Census Region, 1997

	West Census Region				RSE Row Factors
	Total U.S.	Census Division			
		Total	Mountain	Pacific	
RSE Column Factor:	0.4	1.1	1.8	1.4	
Million Households					
Total U.S. Households	101.5	21.8	6.2	15.6	NF
No/Don't Use Air-Conditioning	28.8	13.2	3.2	9.9	6.7
Electric Air-Conditioning ¹	72.6	8.7	2.9	5.7	6.9
Central Air-Conditioning ²	47.5	5.9	2.1	3.8	7.9
Room/Wall Air-Conditioning	25.2	2.8	0.8	1.9	11.3
Quadrillion Btu					
Electric Air-Conditioning Btu Consumption					
Total	0.42	0.04	0.02	0.02	9.6
Central Air-Conditioning	0.34	0.03	0.02	0.02	10.3
Room/Wall Air-Conditioning	0.07	0.01	(*)	(*)	14.4
Billion kWh					
Electric Air-Conditioning kWh Consumption					
Total	122	11	6	6	9.6
Central Air-Conditioning	101	9	5	5	10.3
Room/Wall Air-Conditioning	21	2	1	1	14.4
Million Btu per Household³					
Electric Air-Conditioning Btu Consumption per Household					
Electric Air-Conditioning	5.7	4.4	6.4	3.4	8.6
Central Air-Conditioning	7.2	5.4	7.8	4.1	8.0
Room/Wall Air-Conditioning	2.9	2.2	2.8	1.9	11.8
kWh per Household³					
Electric Air-Conditioning kWh Consumption per Household					
Electric Air-Conditioning	1,677	1,287	1,870	987	8.6
Central Air-Conditioning	2,123	1,594	2,292	1,205	8.0
Room/Wall Air-Conditioning	837	639	815	562	11.8
1997 Cooling Degree-Days (CDD) per Household³					
1997 Cooling Degree-Days per Household					
Total U.S. Households	1,274	1,166	1,562	1,010	6.6
No/Don't Use Air-Conditioning	868	923	1,053	880	9.3
Electric Air-Conditioning	1,435	1,536	2,122	1,235	7.2
Central Air-Conditioning	1,576	1,705	2,482	1,272	7.5
Room/Wall Air-Conditioning	1,169	1,181	1,225	1,162	9.4

See footnotes at end of table.

Table CE3-12c. Electric Air-Conditioning Energy Consumption in U.S. Households by West Census Region, 1997 (Continued)

	West Census Region				RSE Row Factors
	Total U.S.	Census Division			
		Total	Mountain	Pacific	
RSE Column Factor:	0.4	1.1	1.8	1.4	
Cooled Square Footage (CSF) per Household³					
Cooled Square Footage per Household⁴					
Electric Air-Conditioning	1,464	1,303	1,294	1,308	4.6
Central Air-Conditioning	1,823	1,609	1,540	1,647	4.3
Room/Wall Air-Conditioning	786	659	679	650	6.3
Air-Conditioning Intensity [kWh÷(CDD×(CSF÷1000))]³					
Air-Conditioning Intensity					
Electric Air-Conditioning	0.80	0.64	0.68	0.61	4.4
Central Air-Conditioning	0.74	0.58	0.60	0.58	4.4
Room/Wall Air-Conditioning	0.91	0.82	0.98	0.74	6.5

¹ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

² Includes 642,000 households using room/wall air-conditioners in addition to central air-conditioning. These room/wall air-conditioners are not included in the count of 25.2 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

³ Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

(*) = Value rounds to zero in the units displayed.

NF = No applicable RSE row factor.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

1997 Consumption and Expenditures Tables

Electric Air-Conditioning Expenditures Tables

(20 pages, 52 kb)

Contents

Pages

CE3-1e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Climate Zone, 1997	2
CE3-2e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Year of Construction, 1997	2
CE3-3e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Household Income, 1997	2
CE3-4e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Type of Housing Unit, 1997	2
CE3-7e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Four Most Populated States, 1997	2
CE3-8e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Urban/Rural Location, 1997	2
CE3-9e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Northeast Census Region, 1997	2
CE3-10e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Midwest Census Region, 1997	2
CE3-11e. Electric Air-Conditioning Energy Expenditures in U.S. Households by South Census Region, 1997	2
CE3-12e. Electric Air-Conditioning Energy Expenditures in U.S. Households by West Census Region, 1997	2

These data are from the 1997 Residential Energy Consumption Survey (RECS) which provides information on the use of energy in residential housing units in the United States. The RECS is a national statistical survey that collects data for occupied primary housing units. RECS was first conducted in 1978; the sixth and most recent survey was conducted in 1997 RECS. The data were collected from a sample of 5,900 housing units statistically selected to represent the 101.5 million units in the United States. The 1997 data are available for the four Census regions, the nine Census divisions, and for the four most populous States--California, Florida, New York, and Texas.

Data provided here are in the public domain and may be reproduced without permission. Appropriate credit would be appreciated. A suggested citation is "U.S. Department of Energy, Energy Information Administration, *"A Look at Residential Energy Consumption in 1997."*

Electronic Products and Services

Users can view and download selected pages or entire reports, search for information, download data and analysis applications, and find out about new information products and services.

Contact: Robert Latta, Survey Manager (rlatta@eia.doe.gov)

World Wide Web: <http://www.eia.doe.gov/emeu/consumption>

Table CE3-1e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Climate Zone, 1997

	Climate Zone ¹						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factor:	0.5	1.9	1.1	0.9	1.1	0.9	
Million Households							
Total U.S. Households	101.5	9.3	28.0	22.5	19.5	22.2	8.3
No/Don't Use Air-Conditioning	28.8	4.1	9.8	4.9	7.5	2.6	9.8
Electric Air-Conditioning ²	72.6	5.2	18.2	17.6	12.0	19.6	8.4
Central Air-Conditioning ³	47.5	2.9	10.5	10.3	8.4	15.3	10.0
Room/Wall Air-Conditioning	25.2	2.3	7.7	7.3	3.6	4.3	11.2
Billion Dollars							
Electric Air-Conditioning Expenditures							
Total	10.20	0.25	1.25	1.84	1.70	5.16	10.4
Central Air-Conditioning	8.29	0.19	0.93	1.35	1.39	4.43	11.4
Room/Wall Air-Conditioning	1.91	0.06	0.32	0.49	0.31	0.73	13.0
Dollars per Household⁴							
Electric Air-Conditioning Expenditures per Household							
Electric Air-Conditioning	140	48	69	105	141	264	4.8
Central Air-Conditioning	175	65	89	131	165	290	4.5
Room/Wall Air-Conditioning	76	26	41	68	85	171	6.2
1997 Cooling Degree-Days (CDD) per Household⁴							
1997 Cooling Degree-Days per Household							
Total U.S. Households	1,274	464	590	988	1,310	2,735	4.1
No/Don't Use Air-Conditioning	868	418	487	769	1,054	2,647	7.1
Electric Air-Conditioning	1,435	500	645	1,048	1,470	2,746	3.5
Central Air-Conditioning	1,576	518	658	1,081	1,503	2,782	4.0
Room/Wall Air-Conditioning	1,169	477	628	1,001	1,393	2,619	3.9
Cooled Square Footage (CSF) per Household⁴							
Cooled Square Footage per Household⁵							
Electric Air-Conditioning	1,464	1,705	1,525	1,455	1,389	1,396	3.4
Central Air-Conditioning	1,823	2,314	2,091	1,891	1,690	1,574	3.1
Room/Wall Air-Conditioning	786	944	751	837	690	757	4.9

See footnotes at end of table.

Table CE3-1e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Climate Zone, 1997 (Continued)

	Total	Climate Zone ¹					RSE Row Factors
		Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factor:	0.5	1.9	1.1	0.9	1.1	0.9	

Air-Conditioning Intensity [Cents÷{CDD×(CSF÷1000)}]⁴

Air-Conditioning Intensity							
Electric Air-Conditioning	6.69	5.64	6.97	6.86	6.92	6.88	2.7
Central Air-Conditioning	6.08	5.46	6.44	6.39	6.51	6.61	2.7
Room/Wall Air-Conditioning	8.25	5.86	8.75	8.08	8.86	8.61	5.0

¹ One of five climatically distinct areas, determined according to the 30-year average (1961-1990) of the annual heating and cooling degree-days. For this report, the heating or cooling degree-days are a measure of how cold or how hot a location is over a period of one year, relative to a base temperature of 65 degrees Fahrenheit. A household is assigned to a climate zone according to the 30-year average annual degree-days for an appropriate nearby weather station.

² The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

³ Includes 642,000 households using room/wall air-conditioners in addition to central air-conditioning. These room/wall air-conditioners are not included in the count of 25.2 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

⁴ Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

⁵ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE3-2e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Year of Construction, 1997

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ¹	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.9	1.2	1.0	1.0	1.1	0.9	
Million Households								
Total U.S. Households	101.5	9.7	17.3	19.6	14.4	12.5	27.9	4.2
No/Don't Use Air-Conditioning	28.8	1.4	2.7	4.9	4.4	3.6	11.8	7.9
Electric Air-Conditioning ²	72.6	8.3	14.6	14.7	10.0	8.9	16.1	4.7
Central Air-Conditioning ³	47.5	7.5	12.9	10.8	6.5	4.6	5.2	6.2
Room/Wall Air-Conditioning	25.2	0.8	1.8	3.9	3.5	4.3	10.9	8.6
Billion Dollars								
Electric Air-Conditioning Expenditures								
Total	10.20	1.49	2.60	2.30	1.34	1.08	1.40	7.3
Central Air-Conditioning	8.29	1.44	2.47	1.98	1.06	0.69	0.66	8.7
Room/Wall Air-Conditioning	1.91	0.05	0.13	0.32	0.28	0.39	0.74	11.2
Dollars per Household⁴								
Electric Air-Conditioning Expenditures per Household								
Electric Air-Conditioning	140	179	177	157	134	121	87	5.5
Central Air-Conditioning	175	191	192	184	162	150	128	5.8
Room/Wall Air-Conditioning	76	62	71	83	81	90	68	8.4
1997 Cooling Degree-Days (CDD) per Household⁴								
1997 Cooling Degree-Days per Household								
Total U.S. Households	1,274	1,342	1,557	1,411	1,312	1,257	967	3.9
No/Don't Use Air-Conditioning	868	736	746	877	1,017	943	828	7.7
Electric Air-Conditioning	1,435	1,443	1,704	1,589	1,443	1,385	1,068	4.1
Central Air-Conditioning	1,576	1,478	1,788	1,689	1,558	1,399	1,135	4.9
Room/Wall Air-Conditioning	1,169	1,112	1,094	1,312	1,225	1,370	1,037	5.9
Cooled Square Footage (CSF) per Household⁴								
Cooled Square Footage per Household⁵								
Electric Air-Conditioning	1,464	2,001	1,643	1,436	1,412	1,321	1,158	3.0
Central Air-Conditioning	1,823	2,134	1,770	1,708	1,730	1,786	1,895	2.8
Room/Wall Air-Conditioning	786	760	717	688	811	825	810	5.6

See footnotes at end of table.

Table CE3-2e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Year of Construction, 1997 (Continued)

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ¹	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.9	1.2	1.0	1.0	1.1	0.9	

Air-Conditioning Intensity [Cents÷(CDD×(CSF÷1000))]⁴

Air-Conditioning Intensity	Total	1990 to 1997 ¹	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	RSE Row Factors
Electric Air-Conditioning	6.69	6.19	6.33	6.87	6.57	6.61	7.03	3.1
Central Air-Conditioning	6.08	6.06	6.06	6.37	6.00	5.99	5.95	3.3
Room/Wall Air-Conditioning	8.25	7.38	9.06	9.17	8.15	7.97	8.04	6.1

¹ New construction for 1997 includes only those housing units built and occupied between January and the April-August period when the household interviews were conducted.

² The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

³ Includes 642,000 households using room/wall air-conditioners in addition to central air-conditioning. These room/wall air-conditioners are not included in the count of 25.2 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

⁴ Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

⁵ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE3-3e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Household Income, 1997

	Total	1997 Household Income				Below Poverty Line	Eligible for Federal Assistance ¹	RSE Row Factors
		Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.6	1.6	1.0	0.8	0.9	1.4	1.0	
Million Households								
Total U.S. Households	101.5	13.3	29.1	31.1	27.9	14.6	34.1	2.7
No/Don't Use Air-Conditioning	28.8	5.2	9.9	8.0	5.7	6.4	13.2	5.2
Electric Air-Conditioning ²	72.6	8.1	19.3	23.1	22.2	8.3	20.9	3.6
Central Air-Conditioning ³	47.5	3.6	10.9	15.6	17.3	3.7	10.5	5.4
Room/Wall Air-Conditioning	25.2	4.4	8.4	7.5	4.9	4.6	10.4	5.7
Billion Dollars								
Electric Air-Conditioning Expenditures								
Total	10.20	0.91	2.39	2.86	4.04	1.00	2.48	6.1
Central Air-Conditioning	8.29	0.56	1.75	2.35	3.64	0.61	1.64	7.8
Room/Wall Air-Conditioning	1.91	0.36	0.64	0.51	0.41	0.39	0.84	8.5
Dollars per Household⁴								
Electric Air-Conditioning Expenditures per Household								
Electric Air-Conditioning	140	113	124	124	182	120	119	4.8
Central Air-Conditioning	175	153	161	150	210	165	156	5.5
Room/Wall Air-Conditioning	76	81	76	68	84	84	81	6.2
1997 Cooling Degree-Days (CDD) per Household⁴								
1997 Cooling Degree-Days per Household								
Total U.S. Households	1,274	1,392	1,339	1,197	1,235	1,379	1,322	3.1
No/Don't Use Air-Conditioning	868	984	921	808	752	1,003	961	5.5
Electric Air-Conditioning	1,435	1,657	1,553	1,332	1,359	1,666	1,551	3.2
Central Air-Conditioning	1,576	1,829	1,805	1,482	1,464	1,894	1,737	4.2
Room/Wall Air-Conditioning	1,169	1,515	1,227	1,020	983	1,486	1,363	4.0
Cooled Square Footage (CSF) per Household⁴								
Cooled Square Footage per Household⁵								
Electric Air-Conditioning	1,464	884	1,117	1,449	1,990	921	1,055	2.9
Central Air-Conditioning	1,823	1,274	1,425	1,717	2,284	1,346	1,417	3.2
Room/Wall Air-Conditioning	786	563	718	889	945	586	691	3.7

See footnotes at end of table.

Table CE3-3e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Household Income, 1997 (Continued)

	Total	1997 Household Income				Below Poverty Line	Eligible for Federal Assistance ¹	RSE Row Factors
		Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.6	1.6	1.0	0.8	0.9	1.4	1.0	

Air-Conditioning Intensity [Cents÷(CDD×(CSF÷1000))]⁴

Air-Conditioning Intensity	Total	Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More	Below Poverty Line	Eligible for Federal Assistance ¹	RSE Row Factors
Electric Air-Conditioning	6.69	7.72	7.14	6.40	6.73	7.83	7.25	2.8
Central Air-Conditioning	6.08	6.55	6.27	5.91	6.27	6.49	6.35	3.3
Room/Wall Air-Conditioning	8.25	9.44	8.60	7.47	8.99	9.68	8.59	4.4

¹ Below 150 percent of poverty line or 60 percent of median State income.

² The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

³ Includes 642,000 households using room/wall air-conditioners in addition to central air-conditioning. These room/wall air-conditioners are not included in the count of 25.2 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

⁴ Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

⁵ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE3-4e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Type of Housing Unit, 1997

	Type of Housing Unit					RSE Row Factors
	Total	Single-Family	Multifamily		Mobile Home	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.5	0.6	1.7	1.3	1.6	
Million Households						
Total U.S. Households	101.5	73.7	5.6	15.8	6.3	4.1
No/Don't Use Air-Conditioning	28.8	19.9	2.2	4.9	1.8	7.6
Electric Air-Conditioning ¹	72.6	53.8	3.4	10.9	4.5	4.8
Central Air-Conditioning ²	47.5	36.8	1.6	6.5	2.6	7.0
Room/Wall Air-Conditioning	25.2	17.1	1.8	4.4	1.9	7.8
Billion Dollars						
Electric Air-Conditioning Expenditures						
Total	10.20	8.06	0.29	1.06	0.79	7.6
Central Air-Conditioning	8.29	6.71	0.20	0.82	0.57	8.9
Room/Wall Air-Conditioning	1.91	1.35	0.09	0.24	0.22	9.8
Dollars per Household³						
Electric Air-Conditioning Expenditures per Household						
Electric Air-Conditioning	140	150	85	98	175	5.6
Central Air-Conditioning	175	182	125	126	216	6.0
Room/Wall Air-Conditioning	76	79	50	55	118	6.6
1997 Cooling Degree-Days (CDD) per Household³						
1997 Cooling Degree-Days per Household						
Total U.S. Households	1,274	1,257	1,084	1,418	1,282	4.6
No/Don't Use Air-Conditioning	868	838	779	1,001	942	7.4
Electric Air-Conditioning	1,435	1,411	1,280	1,607	1,420	4.7
Central Air-Conditioning	1,576	1,520	1,591	1,907	1,545	5.6
Room/Wall Air-Conditioning	1,169	1,178	1,007	1,167	1,245	4.9
Cooled Square Footage (CSF) per Household³						
Cooled Square Footage per Household⁴						
Electric Air-Conditioning	1,464	1,699	770	747	904	2.7
Central Air-Conditioning	1,823	2,063	1,035	937	1,125	2.6
Room/Wall Air-Conditioning	786	915	537	470	594	3.6

See footnotes at end of table.

Table CE3-4e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Type of Housing Unit, 1997 (Continued)

	Total	Type of Housing Unit			Mobile Home	RSE Row Factors
		Single-Family	Multifamily			
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.5	0.6	1.7	1.3	1.6	

Air-Conditioning Intensity [Cents÷(CDD×(CSF÷1000))]³

Air-Conditioning Intensity	Total	Single-Family	Two to Four Units	Five or More Units	Mobile Home	RSE Row Factors
Electric Air-Conditioning	6.69	6.24	8.63	8.12	13.64	2.7
Central Air-Conditioning	6.08	5.82	7.59	7.08	12.41	2.9
Room/Wall Air-Conditioning	8.25	7.34	9.25	10.08	15.98	5.0

¹ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

² Includes 642,000 households using room/wall air-conditioners in addition to central air-conditioning. These room/wall air-conditioners are not included in the count of 25.2 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

³ Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE3-7e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Four Most Populated States, 1997

	Total U.S.	Four Most Populated States				RSE Row Factors
		New York	California	Texas	Florida	
RSE Column Factor:	0.4	1.3	1.7	1.1	1.0	
Million Households						
Total U.S. Households	101.5	6.8	11.5	7.0	5.9	NF
No/Don't Use Air-Conditioning	28.8	2.6	6.9	0.6	0.3	11.5
Electric Air-Conditioning ¹	72.6	4.2	4.6	6.3	5.6	3.3
Central Air-Conditioning ²	47.5	1.3	3.2	4.8	4.9	5.4
Room/Wall Air-Conditioning	25.2	3.0	1.4	1.6	0.7	10.7
Billion Dollars						
Electric Air-Conditioning Expenditures						
Total	10.20	0.34	0.58	1.69	1.80	10.3
Central Air-Conditioning	8.29	0.13	0.50	1.41	1.65	10.6
Room/Wall Air-Conditioning	1.91	0.21	0.09	0.28	0.15	17.2
Dollars per Household³						
Electric Air-Conditioning Expenditures per Household						
Electric Air-Conditioning	140	80	127	266	322	8.0
Central Air-Conditioning	175	104	156	296	338	9.1
Room/Wall Air-Conditioning	76	69	63	175	210	10.9
1997 Cooling Degree-Days (CDD) per Household³						
1997 Cooling Degree-Days per Household						
Total U.S. Households	1,274	775	1,132	2,494	3,547	5.7
No/Don't Use Air-Conditioning	868	763	968	2,125	3,567	8.6
Electric Air-Conditioning	1,435	782	1,380	2,530	3,546	5.0
Central Air-Conditioning	1,576	585	1,427	2,536	3,524	6.6
Room/Wall Air-Conditioning	1,169	865	1,274	2,511	3,694	5.1
Cooled Square Footage (CSF) per Household³						
Cooled Square Footage per Household⁴						
Electric Air-Conditioning	1,464	1,081	1,297	1,402	1,523	5.4
Central Air-Conditioning	1,823	1,953	1,622	1,617	1,627	5.9
Room/Wall Air-Conditioning	786	713	556	748	822	7.8

See footnotes at end of table.

Table CE3-7e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Four Most Populated States, 1997 (Continued)

	Total U.S.	Four Most Populated States				RSE Row Factors
		New York	California	Texas	Florida	
RSE Column Factor:	0.4	1.3	1.7	1.1	1.0	
Air-Conditioning Intensity [Cents÷{CDD×(CSF÷1000)}]³						
Air-Conditioning Intensity						
Electric Air-Conditioning	6.69	9.41	7.11	7.51	5.96	3.6
Central Air-Conditioning	6.08	9.14	6.72	7.22	5.90	4.4
Room/Wall Air-Conditioning	8.25	11.19	8.89	9.32	6.90	6.0

¹ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

² Includes 642,000 households using room/wall air-conditioners in addition to central air-conditioning. These room/wall air-conditioners are not included in the count of 25.2 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

³ Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

NF = No applicable RSE row factor.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE3-8e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Urban/Rural Location, 1997

	Total	Urban/Rural Location ¹				RSE Row Factors
		City	Town	Suburbs	Rural	
RSE Column Factor:	0.6	0.8	1.4	1.2	1.2	
Million Households						
Total U.S. Households	101.5	48.2	18.2	18.6	16.5	4.2
No/Don't Use Air-Conditioning	28.8	15.1	5.1	3.7	4.9	7.0
Electric Air-Conditioning ²	72.6	33.1	13.1	14.8	11.5	4.4
Central Air-Conditioning ³	47.5	20.5	7.8	11.9	7.2	5.5
Room/Wall Air-Conditioning	25.2	12.6	5.4	2.9	4.3	6.9
Billion Dollars						
Electric Air-Conditioning Expenditures						
Total	10.20	4.58	1.48	2.61	1.53	6.3
Central Air-Conditioning	8.29	3.59	1.15	2.38	1.18	7.1
Room/Wall Air-Conditioning	1.91	1.00	0.33	0.23	0.35	9.2
Dollars per Household⁴						
Electric Air-Conditioning Expenditures per Household						
Electric Air-Conditioning	140	138	113	176	132	4.5
Central Air-Conditioning	175	175	148	199	162	4.6
Room/Wall Air-Conditioning	76	79	62	78	82	6.6
1997 Cooling Degree-Days (CDD) per Household⁴						
1997 Cooling Degree-Days per Household						
Total U.S. Households	1,274	1,401	1,071	1,293	1,105	3.8
No/Don't Use Air-Conditioning	868	993	690	818	705	6.7
Electric Air-Conditioning	1,435	1,586	1,219	1,412	1,276	3.8
Central Air-Conditioning	1,576	1,794	1,362	1,484	1,340	4.4
Room/Wall Air-Conditioning	1,169	1,248	1,011	1,118	1,166	4.9
Cooled Square Footage (CSF) per Household⁴						
Cooled Square Footage per Household⁵						
Electric Air-Conditioning	1,464	1,295	1,429	1,832	1,514	2.7
Central Air-Conditioning	1,823	1,653	1,823	2,068	1,900	2.5
Room/Wall Air-Conditioning	786	713	856	863	859	4.2

See footnotes at end of table.

Table CE3-8e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Urban/Rural Location, 1997 (Continued)

	Total	Urban/Rural Location ¹				RSE Row Factors
		City	Town	Suburbs	Rural	
RSE Column Factor:	0.6	0.8	1.4	1.2	1.2	

Air-Conditioning Intensity [Cents÷{CDD×(CSF÷1000)}]⁴

Air-Conditioning Intensity	Total	City	Town	Suburbs	Rural	RSE Row Factors
Electric Air-Conditioning	6.69	6.74	6.48	6.79	6.86	2.4
Central Air-Conditioning	6.08	5.90	5.94	6.50	6.38	2.6
Room/Wall Air-Conditioning	8.25	8.86	7.20	8.10	8.14	4.6

¹ Based on the household respondent's description rather than the Federal Government definition.

² The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

³ Includes 642,000 households using room/wall air-conditioners in addition to central air-conditioning. These room/wall air-conditioners are not included in the count of 25.2 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

⁴ Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

⁵ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE3-9e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Northeast Census Region, 1997

	Total U.S.	Northeast Census Region			RSE Row Factors
		Total	Census Division		
			Middle Atlantic	New England	
RSE Column Factor:	0.5	1.0	1.1	2.0	
Million Households					
Total U.S. Households	101.5	19.7	14.4	5.3	NF
No/Don't Use Air-Conditioning	28.8	7.6	4.7	2.8	6.9
Electric Air-Conditioning ¹	72.6	12.2	9.7	2.5	4.2
Central Air-Conditioning ²	47.5	4.4	4.0	0.4	11.2
Room/Wall Air-Conditioning	25.2	7.8	5.7	2.1	7.4
Billion Dollars					
Electric Air-Conditioning Expenditures					
Total	10.20	0.90	0.77	0.13	7.5
Central Air-Conditioning	8.29	0.48	0.44	0.04	11.1
Room/Wall Air-Conditioning	1.91	0.42	0.33	0.09	9.7
Dollars per Household³					
Electric Air-Conditioning Expenditures per Household					
Electric Air-Conditioning	140	74	80	52	5.0
Central Air-Conditioning	175	110	111	91	7.5
Room/Wall Air-Conditioning	76	54	58	44	5.6
1997 Cooling Degree-Days (CDD) per Household³					
1997 Cooling Degree-Days per Household					
Total U.S. Households	1,274	688	743	537	3.9
No/Don't Use Air-Conditioning	868	627	719	473	6.5
Electric Air-Conditioning	1,435	725	755	609	2.8
Central Air-Conditioning	1,576	673	679	614	4.8
Room/Wall Air-Conditioning	1,169	755	808	608	2.8
Cooled Square Footage (CSF) per Household³					
Cooled Square Footage per Household⁴					
Electric Air-Conditioning	1,464	1,271	1,323	1,070	5.0
Central Air-Conditioning	1,823	2,158	2,148	2,262	5.2
Room/Wall Air-Conditioning	786	774	751	836	5.0

See footnotes at end of table.

Table CE3-9e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Northeast Census Region, 1997 (Continued)

	Total U.S.	Northeast Census Region			RSE Row Factors
		Total	Census Division		
			Middle Atlantic	New England	
RSE Column Factor:	0.5	1.0	1.1	2.0	

Air-Conditioning Intensity [Cents÷(CDD×(CSF÷1000))]³

Air-Conditioning Intensity	Total U.S.	Total	Middle Atlantic	New England	RSE Row Factors
Electric Air-Conditioning	6.69	8.04	7.99	7.99	3.7
Central Air-Conditioning	6.08	7.54	7.64	6.58	5.1
Room/Wall Air-Conditioning	8.25	9.29	9.54	8.73	4.4

¹ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

² Includes 642,000 households using room/wall air-conditioners in addition to central air-conditioning. These room/wall air-conditioners are not included in the count of 25.2 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

³ Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

NF = No applicable RSE row factor.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE3-10e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Midwest Census Region, 1997

	Total U.S.	Midwest Census Region			RSE Row Factors
		Total	Census Division		
			East North Central	West North Central	
		0.6	1.0	1.1	
Million Households					
Total U.S. Households	101.5	24.1	16.9	7.2	NF
No/Don't Use Air-Conditioning	28.8	5.5	4.6	0.9	8.0
Electric Air-Conditioning ¹	72.6	18.6	12.4	6.3	2.2
Central Air-Conditioning ²	47.5	12.3	8.0	4.3	4.2
Room/Wall Air-Conditioning	25.2	6.3	4.3	2.0	8.1
Billion Dollars					
Electric Air-Conditioning Expenditures					
Total	10.20	1.52	0.95	0.56	5.3
Central Air-Conditioning	8.29	1.25	0.77	0.48	6.5
Room/Wall Air-Conditioning	1.91	0.27	0.18	0.09	10.3
Dollars per Household³					
Electric Air-Conditioning Expenditures per Household					
Electric Air-Conditioning	140	81	77	90	4.6
Central Air-Conditioning	175	101	95	111	3.9
Room/Wall Air-Conditioning	76	43	43	44	7.4
1997 Cooling Degree-Days (CDD) per Household³					
1997 Cooling Degree-Days per Household					
Total U.S. Households	1,274	704	637	862	4.2
No/Don't Use Air-Conditioning	868	592	563	739	4.0
Electric Air-Conditioning	1,435	737	664	880	4.5
Central Air-Conditioning	1,576	754	670	911	4.9
Room/Wall Air-Conditioning	1,169	703	653	811	4.8
Cooled Square Footage (CSF) per Household³					
Cooled Square Footage per Household⁴					
Electric Air-Conditioning	1,464	1,701	1,671	1,758	3.2
Central Air-Conditioning	1,823	2,137	2,132	2,145	3.0
Room/Wall Air-Conditioning	786	843	813	909	5.5

See footnotes at end of table.

Table CE3-10e. Electric Air-Conditioning Energy Expenditures in U.S. Households by Midwest Census Region, 1997 (Continued)

	Total U.S.	Midwest Census Region			RSE Row Factors
		Total	Census Division		
			East North Central	West North Central	
RSE Column Factor:	0.6	1.0	1.1	1.5	

Air-Conditioning Intensity [Cents÷(CDD×(CSF÷1000))]³

Air-Conditioning Intensity	Total U.S.	Total	East North Central	West North Central	RSE Row Factors
Electric Air-Conditioning	6.69	6.50	6.93	5.83	2.0
Central Air-Conditioning	6.08	6.26	6.67	5.70	1.9
Room/Wall Air-Conditioning	8.25	7.27	8.03	5.97	6.1

¹ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

² Includes 642,000 households using room/wall air-conditioners in addition to central air-conditioning. These room/wall air-conditioners are not included in the count of 25.2 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

³ Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage.

NF = No applicable RSE row factor.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE3-11e. Electric Air-Conditioning Energy Expenditures in U.S. Households by South Census Region, 1997

	South Census Region					RSE Row Factors
	Total U.S.	Census Division			West South Central	
		Total	South Atlantic	East South Central		
RSE Column Factor:	0.6	0.8	1.1	1.3	1.4	
Million Households						
Total U.S. Households	101.5	35.9	18.7	6.3	10.8	NF
No/Don't Use Air-Conditioning	28.8	2.7	1.5	0.4	0.8	11.5
Electric Air-Conditioning ¹	72.6	33.2	17.2	6.0	10.0	1.5
Central Air-Conditioning ²	47.5	24.9	13.3	4.2	7.4	3.2
Room/Wall Air-Conditioning	25.2	8.3	3.9	1.8	2.6	6.7
Billion Dollars						
Electric Air-Conditioning Expenditures						
Total	10.20	6.67	3.36	0.80	2.51	5.1
Central Air-Conditioning	8.29	5.63	2.93	0.65	2.05	5.6
Room/Wall Air-Conditioning	1.91	1.04	0.43	0.15	0.47	9.7
Dollars per Household³						
Electric Air-Conditioning Expenditures per Household						
Electric Air-Conditioning	140	201	195	133	251	4.7
Central Air-Conditioning	175	226	220	155	278	4.4
Room/Wall Air-Conditioning	76	125	111	82	175	7.0
1997 Cooling Degree-Days (CDD) per Household³						
1997 Cooling Degree-Days per Household						
Total U.S. Households	1,274	2,044	2,023	1,518	2,387	4.3
No/Don't Use Air-Conditioning	868	1,840	1,758	1,481	2,149	7.6
Electric Air-Conditioning	1,435	2,060	2,046	1,520	2,406	4.2
Central Air-Conditioning	1,576	2,112	2,137	1,529	2,399	4.5
Room/Wall Air-Conditioning	1,169	1,905	1,737	1,500	2,425	4.7
Cooled Square Footage (CSF) per Household³						
Cooled Square Footage per Household⁴						
Electric Air-Conditioning	1,464	1,443	1,496	1,407	1,375	2.6
Central Air-Conditioning	1,823	1,659	1,695	1,679	1,584	2.8
Room/Wall Air-Conditioning	786	796	813	765	791	4.3

See footnotes at end of table.

Table CE3-11e. Electric Air-Conditioning Energy Expenditures in U.S. Households by South Census Region, 1997 (Continued)

	Total U.S.	South Census Region				RSE Row Factors
		Total	Census Division			
			South Atlantic	East South Central	West South Central	
RSE Column Factor:	0.6	0.8	1.1	1.3	1.4	

Air-Conditioning Intensity [Cents÷(CDD×(CSF÷1000))]³

Air-Conditioning Intensity	Total U.S.	Total	South Atlantic	East South Central	West South Central	RSE Row Factors
Electric Air-Conditioning	6.69	6.76	6.39	6.24	7.58	2.0
Central Air-Conditioning	6.08	6.46	6.08	6.05	7.31	2.2
Room/Wall Air-Conditioning	8.25	8.26	7.85	7.14	9.15	4.2

¹ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

² Includes 642,000 households using room/wall air-conditioners in addition to central air-conditioning. These room/wall air-conditioners are not included in the count of 25.2 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

³ Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage. NF = No applicable RSE row factor.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE3-12e. Electric Air-Conditioning Energy Expenditures in U.S. Households by West Census Region, 1997

	West Census Region				RSE Row Factors
	Total U.S.	Census Division			
		Total	Mountain	Pacific	
RSE Column Factor:	0.4	1.1	1.8	1.4	
Million Households					
Total U.S. Households	101.5	21.8	6.2	15.6	NF
No/Don't Use Air-Conditioning	28.8	13.2	3.2	9.9	6.7
Electric Air-Conditioning ¹	72.6	8.7	2.9	5.7	6.9
Central Air-Conditioning ²	47.5	5.9	2.1	3.8	7.9
Room/Wall Air-Conditioning	25.2	2.8	0.8	1.9	11.3
Billion Dollars					
Electric Air-Conditioning Expenditures					
Total	10.20	1.11	0.48	0.63	10.0
Central Air-Conditioning	8.29	0.94	0.42	0.52	10.6
Room/Wall Air-Conditioning	1.91	0.17	0.06	0.11	15.7
Dollars per Household³					
Electric Air-Conditioning Expenditures per Household					
Electric Air-Conditioning	140	128	161	111	9.1
Central Air-Conditioning	175	160	199	138	8.4
Room/Wall Air-Conditioning	76	61	68	58	13.8
1997 Cooling Degree-Days (CDD) per Household³					
1997 Cooling Degree-Days per Household					
Total U.S. Households	1,274	1,166	1,562	1,010	6.6
No/Don't Use Air-Conditioning	868	923	1,053	880	9.3
Electric Air-Conditioning	1,435	1,536	2,122	1,235	7.2
Central Air-Conditioning	1,576	1,705	2,482	1,272	7.5
Room/Wall Air-Conditioning	1,169	1,181	1,225	1,162	9.4
Cooled Square Footage (CSF) per Household³					
Cooled Square Footage per Household⁴					
Electric Air-Conditioning	1,464	1,303	1,294	1,308	4.6
Central Air-Conditioning	1,823	1,609	1,540	1,647	4.3
Room/Wall Air-Conditioning	786	659	679	650	6.3

See footnotes at end of table.

Table CE3-12e. Electric Air-Conditioning Energy Expenditures in U.S. Households by West Census Region, 1997 (Continued)

	Total U.S.	West Census Region			RSE Row Factors
		Total	Census Division		
			Mountain	Pacific	
RSE Column Factor:	0.4	1.1	1.8	1.4	

Air-Conditioning Intensity [Cents÷(CDD×(CSF÷1000))]³

Air-Conditioning Intensity	Total U.S.	West Census Region Total	Mountain	Pacific	RSE Row Factors
Electric Air-Conditioning	6.69	6.39	5.88	6.86	4.1
Central Air-Conditioning	6.08	5.82	5.20	6.58	4.2
Room/Wall Air-Conditioning	8.25	7.89	8.22	7.73	7.4

¹ The number of households, where the end use is electric air-conditioning, does **not** include households that did not use their equipment (0.9 million). It does include the small number of households where the fuel for central air-conditioning equipment was something other than electricity; those households were treated as if the fuel was electricity.

² Includes 642,000 households using room/wall air-conditioners in addition to central air-conditioning. These room/wall air-conditioners are not included in the count of 25.2 million households using room/wall air-conditioners. Note: This applies to all occurrences of central air-conditioning.

³ Averages are for those households using any electric air-conditioning, central air-conditioning, or room/wall air-conditioning, as applicable.

⁴ In previous RECS, square footage measurements were obtained during the personal interview. In the 1997 RECS, square footage was estimated using a regression equation developed with the 1993 RECS data. The 1997 RECS estimated square footage tends to be larger than the 1993 measured square footage. NF = No applicable RSE row factor.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

1997 Consumption and Expenditures Tables

Water-Heating Consumption Tables

(33 pages, 95 kb)

Contents

Pages

CE4-1c. Water-Heating Energy Consumption in U.S. Households by Climate Zone, 1997	3
CE4-2c. Water-Heating Energy Consumption in U.S. Households by Year of Construction, 1997	3
CE4-3c. Water-Heating Energy Consumption in U.S. Households by Household Income, 1997	3
CE4-4c. Water-Heating Energy Consumption in U.S. Households by Type of Housing Unit, 1997	3
CE4-5u. Water-Heating Energy Consumption and Expenditures in U.S. Households by Household Demographics, 1997	1
CE4-6u. Water-Heating Energy Consumption and Expenditures in U.S. Households by Usage Indicators, 1997	2
CE4-7c. Water-Heating Energy Consumption in U.S. Households by Four Most Populated States, 1997	3
CE4-8c. Water-Heating Energy Consumption in U.S. Households by Urban/Rural Location, 1997	3
CE4-9c. Water-Heating Energy Consumption in U.S. Households by Northeast Census Region, 1997	3
CE4-10c. Water-Heating Energy Consumption in U.S. Households by Midwest Census Region, 1997	3
CE4-11c. Water-Heating Energy Consumption in U.S. Households by South Census Region, 1997	3
CE4-12c. Water-Heating Energy Consumption in U.S. Households by West Census Region, 1997	3

These data are from the 1997 Residential Energy Consumption Survey (RECS) which provides information on the use of energy in residential housing units in the United States. The RECS is a national statistical survey that collects data for occupied primary housing units. RECS was first conducted in 1978; the sixth and most recent survey was conducted in 1997 RECS. The data were collected from a sample of 5,900 housing units statistically selected to represent the 101.5 million units in the United States. The 1997 data are available for the four Census regions, the nine Census divisions, and for the four most populous States--California, Florida, New York, and Texas.

Data provided here are in the public domain and may be reproduced without permission. Appropriate credit would be appreciated. A suggested citation is "U.S. Department of Energy, Energy Information Administration, *"A Look at Residential Energy Consumption in 1997."*

Electronic Products and Services

Users can view and download selected pages or entire reports, search for information, download data and analysis applications, and find out about new information products and services.

Contact: Robert Latta, Survey Manager (rlatta@eia.doe.gov)

World Wide Web: <http://www.eia.doe.gov/emeu/consumption>

Table CE4-1c. Water-Heating Energy Consumption in U.S. Households by Climate Zone, 1997

	Climate Zone ¹						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factor:	0.4	1.5	1.1	1.1	1.2	1.1	
Million Households							
Total U.S. Households	101.5	9.3	28.0	22.5	19.5	22.2	8.1
No Water Heating	0.2	Q	Q	Q	Q	Q	77.3
Water Heating	101.3	9.3	28.0	22.5	19.5	22.1	8.1
Not Using a Major Fuel ²	0.5	Q	Q	Q	Q	Q	57.1
Using a Major Fuel ²	100.8	9.2	27.9	22.3	19.4	21.9	8.2
For Main Water Heating	100.6	9.1	27.9	22.3	19.4	21.9	8.2
Number of Households with Water Heating, Major Fuels Used:							
Electricity	40.2	3.7	7.9	9.1	7.8	11.8	10.2
Natural Gas	52.8	4.2	17.8	9.9	11.2	9.7	8.8
Fuel Oil	5.2	0.8	1.6	2.7	Q	Q	17.6
Kerosene	Q	Q	Q	Q	Q	Q	NF
LPG	3.2	0.5	0.8	0.7	0.6	0.5	24.4
Quadrillion Btu							
Water-Heating Btu Consumption, Major Fuels Used:							
Electricity	0.39	0.04	0.08	0.09	0.07	0.11	11.3
Natural Gas	1.29	0.11	0.46	0.23	0.27	0.23	9.5
Fuel Oil	0.16	0.02	0.05	0.09	Q	Q	17.3
Kerosene	Q	Q	Q	Q	Q	Q	NF
LPG	0.08	0.01	0.02	0.02	0.02	0.01	25.4
Total	1.92	0.18	0.61	0.43	0.35	0.34	7.3
Physical Units							
Physical Units of Water-Heating Consumption, Major Fuels Used:							
Electricity (billion kWh)	114	11	23	28	22	32	11.3
Natural Gas (billion cf)	1,260	104	451	224	259	222	9.5
Fuel Oil (million gallons)	1,139	175	340	621	Q	Q	17.4
Kerosene (million gallons)	Q	Q	Q	Q	Q	Q	NF
LPG (million gallons)	847	148	227	197	169	107	25.4
Million Btu per Household							
Average Water-Heating Btu Consumption per Household							
Using a Major Fuel ²	19.0	19.7	21.8	19.2	18.3	15.7	2.9
For Main Water Heating	19.1	19.8	21.8	19.2	18.3	15.8	2.9

See footnotes at end of table.

Table CE4-1c. Water-Heating Energy Consumption in U.S. Households by Climate Zone, 1997 (Continued)

	Climate Zone ¹						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
		0.4	1.5	1.1	1.1		
RSE Column Factor:							
Million Households							
Number of Households, Where the Main Water-Heating Fuel Is:							
Electricity	39.6	3.7	7.7	9.0	7.6	11.6	10.3
Natural Gas	52.6	4.2	17.8	9.8	11.2	9.7	8.8
Fuel Oil	5.1	0.8	1.6	2.7	Q	Q	17.7
Kerosene	Q	Q	Q	Q	Q	Q	NF
LPG	3.1	0.5	0.8	0.7	0.6	0.5	24.8
No Water Heating	0.2	Q	Q	Q	Q	Q	77.3
Million Btu per Household⁴							
Water-Heating Btu Consumption per Household,³ Where the Main Water-Heating Fuel Is:							
Electricity	9.8	9.8	10.0	10.5	9.7	9.2	2.9
Natural Gas	24.6	25.5	26.1	23.4	23.7	23.5	2.8
Fuel Oil	30.6	32.3	28.6	31.4	Q	Q	4.2
Kerosene	Q	Q	Q	Q	Q	Q	NF
LPG	24.4	27.3	25.1	25.3	24.5	18.6	9.7
Physical Units (PU) per Household⁴							
Physical Units of Water-Heating Consumption per Household,³ Where the Main Water-Heating Fuel Is:							
Electricity (kWh)	2,871	2,881	2,918	3,070	2,834	2,707	2.9
Natural Gas (thousand cf)	24	25	25	23	23	23	2.8
Fuel Oil (gallons)	221	233	206	226	Q	Q	4.2
Kerosene (gallons)	Q	Q	Q	Q	Q	Q	NF
LPG (gallons)	267	299	274	277	268	203	9.7
Number of Household Members (NHM) per Household⁴							
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:							
Electricity	2.5	2.5	2.4	2.5	2.4	2.5	3.1
Natural Gas	2.7	2.7	2.7	2.5	2.8	2.8	2.8
Fuel Oil	2.4	2.3	2.4	2.5	Q	Q	3.7
Kerosene	Q	Q	Q	Q	Q	Q	NF
LPG	2.6	2.9	2.5	2.3	2.6	2.9	8.5

See footnotes at end of table.

Table CE4-1c. Water-Heating Energy Consumption in U.S. Households by Climate Zone, 1997 (Continued)

	Climate Zone ¹						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factor:	0.4	1.5	1.1	1.1	1.2	1.1	

Water-Heating Intensity (PU÷NHHM)⁴

Water-Heating Intensity, Where the Main Water-Heating Fuel Is:

Electricity	1,169	1,144	1,241	1,225	1,166	1,091	2.7
Natural Gas	8.8	9.2	9.4	9.2	8.2	8.2	2.7
Fuel Oil	90	101	85	91	Q	Q	5.5
Kerosene	Q	Q	Q	Q	Q	Q	NF
LPG	103	104	110	118	104	70	8.7

¹ One of five climatically distinct areas, determined according to the 30-year average (1961-1990) of the annual heating and cooling degree-days. For this report, the heating or cooling degree-days are a measure of how cold or how hot a location is over a period of one year, relative to a base temperature of 65 degrees Fahrenheit. A household is assigned to a climate zone according to the 30-year average annual degree-days for an appropriate nearby weather station.

² The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

³ Includes only the water-heating consumption of the water-heating fuel. Not included are: 1) the consumption of the main water-heating fuel for uses other than water heating; 2) the consumption of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the consumption of other fuels that are used as secondary water-heating fuels.

⁴ Averages are for those households using each of the main water-heating fuels.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE4-2c. Water-Heating Energy Consumption in U.S. Households
by Year of Construction, 1997**

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ¹	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.6	1.3	1.0	1.0	1.1	0.9	
Million Households								
Total U.S. Households	101.5	9.7	17.3	19.6	14.4	12.5	27.9	4.2
No Water Heating	0.2	Q	Q	Q	Q	Q	Q	72.5
Water Heating	101.3	9.7	17.3	19.5	14.4	12.5	27.8	4.2
Not Using a Major Fuel ²	0.5	Q	Q	Q	Q	Q	Q	53.6
Using a Major Fuel ²	100.8	9.7	17.2	19.4	14.3	12.5	27.7	4.2
For Main Water Heating	100.6	9.7	17.2	19.3	14.3	12.5	27.7	4.2
Number of Households with Water Heating, Major Fuels Used:								
Electricity	40.2	4.7	10.1	10.2	4.9	3.6	6.7	6.6
Natural Gas	52.8	4.6	6.4	8.3	8.3	7.8	17.5	6.4
Fuel Oil	5.2	Q	0.4	0.5	0.8	1.0	2.4	17.5
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	3.2	0.2	0.5	0.6	0.4	0.3	1.2	18.3
Quadrillion Btu								
Water-Heating Btu Consumption, Major Fuels Used:								
Electricity	0.39	0.05	0.09	0.10	0.04	0.03	0.07	7.4
Natural Gas	1.29	0.12	0.17	0.20	0.20	0.19	0.41	7.1
Fuel Oil	0.16	Q	0.01	0.01	0.03	0.03	0.08	18.7
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	0.08	0.01	0.02	0.01	0.01	(*)	0.03	20.2
Total	1.92	0.18	0.29	0.33	0.28	0.25	0.58	4.7
Physical Units								
Physical Units of Water-Heating Consumption, Major Fuels Used:								
Electricity (billion kWh)	114	14	28	31	13	9	19	7.4
Natural Gas (billion cf)	1,260	122	167	197	190	183	401	7.1
Fuel Oil (million gallons)	1,139	Q	91	91	183	206	548	18.7
Kerosene (million gallons)	Q	Q	Q	Q	Q	Q	Q	NF
LPG (million gallons)	847	74	165	146	123	45	296	20.2
Million Btu per Household								
Average Water-Heating Btu Consumption per Household								
Using a Major Fuel ²	19.0	19.0	17.1	17.2	19.2	20.2	21.0	2.7
For Main Water Heating	19.1	19.0	17.1	17.2	19.2	20.2	21.0	2.7

See footnotes at end of table.

Table CE4-2c. Water-Heating Energy Consumption in U.S. Households by Year of Construction, 1997 (Continued)

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ¹	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.6	1.3	1.0	1.0	1.1	0.9	
Million Households								
Number of Households, Where the Main Water-Heating Fuel Is:								
Electricity	39.6	4.7	10.0	10.0	4.8	3.5	6.6	6.7
Natural Gas	52.6	4.6	6.3	8.2	8.3	7.7	17.4	6.5
Fuel Oil	5.1	Q	0.4	0.4	0.8	1.0	2.4	17.8
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	3.1	0.2	0.5	0.5	0.4	0.3	1.2	18.6
No Water Heating	0.2	Q	Q	Q	Q	Q	Q	72.5
Million Btu per Household⁴								
Water-Heating Btu Consumption per Household,³ Where the Main Water-Heating Fuel Is:								
Electricity	9.8	10.3	9.5	10.4	9.0	9.2	9.9	2.8
Natural Gas	24.6	27.2	27.1	24.5	23.5	24.2	23.6	2.8
Fuel Oil	30.6	Q	33.7	28.2	30.8	29.5	31.0	6.2
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	24.4	29.1	28.9	23.6	27.1	15.9	22.7	9.5
Physical Units (PU) per Household⁴								
Physical Units of Water-Heating Consumption per Household,³ Where the Main Water-Heating Fuel Is:								
Electricity (kWh)	2,871	3,009	2,787	3,038	2,650	2,700	2,895	2.8
Natural Gas (thousand cf)	24	27	26	24	23	24	23	2.8
Fuel Oil (gallons)	221	Q	243	203	222	213	223	6.2
Kerosene (gallons)	Q	Q	Q	Q	Q	Q	Q	NF
LPG (gallons)	267	319	316	259	297	174	248	9.5
Number of Household Members (NHM) per Household⁴								
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:								
Electricity	2.5	2.6	2.4	2.5	2.3	2.4	2.5	3.0
Natural Gas	2.7	3.0	2.9	2.7	2.6	2.7	2.6	2.9
Fuel Oil	2.4	Q	2.4	2.4	2.4	2.4	2.5	7.6
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	2.6	3.5	3.1	2.7	2.5	2.1	2.3	10.0

See footnotes at end of table.

Table CE4-2c. Water-Heating Energy Consumption in U.S. Households by Year of Construction, 1997 (Continued)

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ¹	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.6	1.3	1.0	1.0	1.1	0.9	

Water-Heating Intensity (PU-NHM)⁴

Water-Heating Intensity, Where the Main Water-Heating Fuel Is:								
Electricity	1,169	1,136	1,169	1,209	1,168	1,126	1,158	2.4
Natural Gas	8.8	8.7	9.1	8.9	8.9	8.6	8.8	2.7
Fuel Oil	90	Q	100	84	92	89	90	9.5
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	103	91	101	97	118	82	108	10.2

¹ New construction for 1997 includes only those housing units built and occupied between January and the April-August period when the household interviews were conducted.

² The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

³ Includes only the water-heating consumption of the water-heating fuel. Not included are: 1) the consumption of the main water-heating fuel for uses other than water heating; 2) the consumption of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the consumption of other fuels that are used as secondary water-heating fuels.

⁴ Averages are for those households using each of the main water-heating fuels.

(*) = Value rounds to zero in the units displayed.
 NF = No applicable RSE row factor.
 Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.
 • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE4-3c. Water-Heating Energy Consumption in U.S. Households by Household Income, 1997

	Total	1997 Household Income				Below Poverty Line	Eligible for Federal Assistance ¹	RSE Row Factors
		Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.6	1.5	1.0	0.9	1.0	1.4	1.0	
Million Households								
Total U.S. Households	101.5	13.3	29.1	31.1	27.9	14.6	34.1	2.7
No Water Heating	0.2	Q	Q	Q	Q	Q	Q	57.9
Water Heating	101.3	13.2	29.1	31.1	27.9	14.6	33.9	2.8
Not Using a Major Fuel ²	0.5	Q	Q	Q	Q	0.2	0.2	37.4
Using a Major Fuel ²	100.8	13.0	29.0	31.0	27.7	14.4	33.7	2.8
For Main Water Heating	100.6	13.0	29.0	31.0	27.6	14.4	33.7	2.8
Number of Households with Water Heating, Major Fuels Used:								
Electricity	40.2	5.4	12.8	12.5	9.4	5.7	13.9	5.3
Natural Gas	52.8	6.2	14.1	16.1	16.3	7.3	16.8	4.9
Fuel Oil	5.2	1.0	1.3	1.5	1.4	0.9	2.0	11.1
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	3.2	0.4	1.0	1.0	0.8	0.5	1.1	15.9
Quadrillion Btu								
Water-Heating Btu Consumption, Major Fuels Used:								
Electricity	0.39	0.04	0.11	0.13	0.11	0.05	0.13	6.1
Natural Gas	1.29	0.13	0.31	0.40	0.46	0.18	0.39	5.4
Fuel Oil	0.16	0.03	0.03	0.05	0.05	0.03	0.06	11.4
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	0.08	0.01	0.02	0.02	0.02	0.01	0.03	17.4
Total	1.92	0.21	0.48	0.59	0.64	0.27	0.61	3.3
Physical Units								
Physical Units of Water-Heating Consumption, Major Fuels Used:								
Electricity (billion kWh)	114	12	34	37	32	16	39	6.1
Natural Gas (billion cf)	1,260	125	303	385	447	171	384	5.4
Fuel Oil (million gallons)	1,139	208	236	342	353	223	435	11.4
Kerosene (million gallons)	Q	Q	Q	Q	Q	Q	Q	NF
LPG (million gallons)	847	76	246	266	260	98	278	17.4
Million Btu per Household								
Average Water-Heating Btu Consumption per Household								
Using a Major Fuel ²	19.0	15.8	16.6	19.1	23.1	18.8	18.1	2.3
For Main Water Heating	19.1	15.8	16.6	19.1	23.1	18.8	18.2	2.3

See footnotes at end of table.

Table CE4-3c. Water-Heating Energy Consumption in U.S. Households by Household Income, 1997 (Continued)

	Total	1997 Household Income				Below Poverty Line	Eligible for Federal Assistance ¹	RSE Row Factors
		Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.6	1.5	1.0	0.9	1.0	1.4	1.0	
Million Households								
Number of Households, Where the Main Water-Heating Fuel Is:								
Electricity	39.6	5.4	12.6	12.4	9.2	5.7	13.8	5.4
Natural Gas	52.6	6.2	14.1	16.0	16.2	7.3	16.8	4.9
Fuel Oil	5.1	0.9	1.3	1.5	1.4	0.9	2.0	11.1
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	3.1	0.4	0.9	1.0	0.8	0.5	1.1	16.1
No Water Heating	0.2	Q	Q	Q	Q	Q	Q	57.9
Million Btu per Household⁴								
Water-Heating Btu Consumption per Household,³ Where the Main Water-Heating Fuel Is:								
Electricity	9.8	7.6	9.1	10.1	11.7	9.6	9.6	2.4
Natural Gas	24.6	20.6	22.0	24.6	28.2	24.2	23.5	2.3
Fuel Oil	30.6	30.2	25.7	31.0	35.1	33.2	30.3	5.4
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	24.4	17.3	23.3	23.6	30.4	18.2	22.8	9.3
Physical Units (PU) per Household⁴								
Physical Units of Water-Heating Consumption per Household,³ Where the Main Water-Heating Fuel Is:								
Electricity (kWh)	2,871	2,233	2,657	2,953	3,430	2,824	2,801	2.4
Natural Gas (thousand cf)	24	20	21	24	27	24	23	2.3
Fuel Oil (gallons)	221	218	186	224	253	239	219	5.3
Kerosene (gallons)	Q	Q	Q	Q	Q	Q	Q	NF
LPG (gallons)	267	189	255	259	333	199	249	9.3
Number of Household Members (NHM) per Household⁴								
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:								
Electricity	2.5	1.8	2.3	2.6	2.9	2.7	2.6	2.4
Natural Gas	2.7	2.2	2.4	2.7	3.1	3.2	2.8	2.4
Fuel Oil	2.4	2.0	2.0	2.5	3.1	2.4	2.3	5.4
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	2.6	1.7	2.7	2.4	3.2	2.7	2.6	8.1

See footnotes at end of table.

Table CE4-3c. Water-Heating Energy Consumption in U.S. Households by Household Income, 1997 (Continued)

	Total	1997 Household Income				Below Poverty Line	Eligible for Federal Assistance ¹	RSE Row Factors
		Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.6	1.5	1.0	0.9	1.0	1.4	1.0	

Water-Heating Intensity (PU÷NHM)⁴

Water-Heating Intensity, Where the Main Water-Heating Fuel Is:								
Electricity	1,169	1,235	1,145	1,149	1,198	1,060	1,094	2.3
Natural Gas	8.8	9.0	8.8	8.7	8.9	7.4	8.1	2.3
Fuel Oil	90	110	93	89	81	100	96	6.7
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	103	114	95	107	103	75	95	9.8

¹ Below 150 percent of poverty line or 60 percent of median State income.

² The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

³ Includes only the water-heating consumption of the water-heating fuel. Not included are: 1) the consumption of the main water-heating fuel for uses other than water heating; 2) the consumption of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the consumption of other fuels that are used as secondary water-heating fuels.

⁴ Averages are for those households using each of the main water-heating fuels.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE4-4c. Water-Heating Energy Consumption in U.S. Households by Type of Housing Unit, 1997

	Type of Housing Unit					RSE Row Factors
	Total	Single-Family	Multifamily		Mobile Home	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.5	0.6	2.0	1.1	1.7	
Million Households						
Total U.S. Households	101.5	73.7	5.6	15.8	6.3	4.0
No Water Heating	0.2	Q	Q	Q	Q	68.5
Water Heating	101.3	73.7	5.6	15.7	6.3	4.0
Not Using a Major Fuel ¹	0.5	0.3	Q	0.2	Q	46.8
Using a Major Fuel ¹	100.8	73.4	5.6	15.5	6.3	4.1
For Main Water Heating	100.6	73.3	5.6	15.5	6.3	4.1
Number of Households with Water Heating, Major Fuels Used:						
Electricity	40.2	27.1	1.8	7.0	4.3	7.2
Natural Gas	52.8	40.9	3.4	7.0	1.4	6.9
Fuel Oil	5.2	3.3	0.3	1.6	Q	15.8
Kerosene	Q	Q	Q	Q	Q	NF
LPG	3.2	2.6	Q	Q	0.5	17.0
Quadrillion Btu						
Water-Heating Btu Consumption, Major Fuels Used:						
Electricity	0.39	0.28	0.01	0.05	0.05	7.8
Natural Gas	1.29	1.04	0.08	0.14	0.03	7.6
Fuel Oil	0.16	0.10	0.01	0.05	Q	16.9
Kerosene	Q	Q	Q	Q	Q	NF
LPG	0.08	0.06	Q	Q	0.01	17.3
Total	1.92	1.48	0.10	0.24	0.09	4.4
Physical Units						
Physical Units of Water-Heating Consumption, Major Fuels Used:						
Electricity (billion kWh)	114	81	4	15	13	7.8
Natural Gas (billion cf)	1,260	1,016	75	139	30	7.6
Fuel Oil (million gallons)	1,139	717	66	356	Q	16.9
Kerosene (million gallons)	Q	Q	Q	Q	Q	NF
LPG (million gallons)	847	694	Q	Q	142	17.3
Million Btu per Household						
Average Water-Heating Btu Consumption per Household						
Using a Major Fuel ¹	19.0	20.2	18.0	15.8	14.2	3.0
For Main Water Heating	19.1	20.2	18.0	15.8	14.2	3.0

See footnotes at end of table.

Table CE4-4c. Water-Heating Energy Consumption in U.S. Households by Type of Housing Unit, 1997 (Continued)

	Type of Housing Unit					RSE Row Factors
	Total	Single-Family	Multifamily		Mobile Home	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.5	0.6	2.0	1.1	1.7	
Million Households						
Number of Households, Where the Main Water-Heating Fuel Is:						
Electricity	39.6	26.6	1.8	6.9	4.3	7.3
Natural Gas	52.6	40.9	3.4	6.9	1.4	6.9
Fuel Oil	5.1	3.2	0.3	1.6	Q	15.9
Kerosene	Q	Q	Q	Q	Q	NF
LPG	3.1	2.6	Q	Q	0.5	17.3
No Water Heating	0.2	Q	Q	Q	Q	68.5
Million Btu per Household³						
Water-Heating Btu Consumption per Household,² Where the Main Water-Heating Fuel Is:						
Electricity	9.8	10.4	8.0	7.6	10.5	2.7
Natural Gas	24.6	25.5	22.4	20.5	21.5	3.2
Fuel Oil	30.6	30.6	29.0	31.1	Q	4.7
Kerosene	Q	Q	Q	Q	Q	NF
LPG	24.4	24.4	Q	Q	24.3	8.1
Physical Units (PU) per Household³						
Physical Units of Water-Heating Consumption per Household,² Where the Main Water-Heating Fuel Is:						
Electricity (kWh)	2,871	3,047	2,332	2,215	3,066	2.7
Natural Gas (thousand cf)	24	25	22	20	21	3.2
Fuel Oil (gallons)	221	220	209	224	Q	4.7
Kerosene (gallons)	Q	Q	Q	Q	Q	NF
LPG (gallons)	267	267	Q	Q	266	8.1
Number of Household Members (NHM) per Household³						
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:						
Electricity	2.5	2.6	2.0	1.9	2.6	2.9
Natural Gas	2.7	2.8	2.4	2.1	2.3	3.1
Fuel Oil	2.4	2.6	1.6	2.2	Q	4.6
Kerosene	Q	Q	Q	Q	Q	NF
LPG	2.6	2.6	Q	Q	2.8	7.5

See footnotes at end of table.

Table CE4-4c. Water-Heating Energy Consumption in U.S. Households by Type of Housing Unit, 1997 (Continued)

	Total	Type of Housing Unit				RSE Row Factors
		Single-Family	Multifamily		Mobile Home	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.5	0.6	2.0	1.1	1.7	

Water-Heating Intensity (PU÷NHH)³

Water-Heating Intensity, Where the Main Water-Heating Fuel Is:

Electricity	1,169	1,170	1,166	1,141	1,199	2.4
Natural Gas	8.8	8.8	8.9	9.4	9.0	2.9
Fuel Oil	90	84	128	100	Q	7.0
Kerosene	Q	Q	Q	Q	Q	NF
LPG	103	105	Q	Q	94	9.3

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the water-heating consumption of the water-heating fuel. Not included are: 1) the consumption of the main water-heating fuel for uses other than water heating; 2) the consumption of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the consumption of other fuels that are used as secondary water-heating fuels.

³ Averages are for those households using each of the main water-heating fuels.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE4-5u. Water-Heating Energy Consumption and Expenditures in U.S. Households by Household Demographics, 1997

Household Demographics	Water-Heating Energy					RSE Row Factors
	Households (millions)	Total		Per Household		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	
	RSE Column Factor:	1.1	1.4	1.2	0.8	
Total	100.8	1.92	19.76	19.0	196	1.4
Household Size						
1 Person	25.3	0.28	2.93	11.0	116	2.4
2 Persons	32.8	0.55	5.99	16.8	183	2.0
3 Persons	17.3	0.39	3.99	22.6	230	2.6
4 Persons	15.1	0.39	3.96	25.8	261	2.9
5 Persons	6.4	0.19	1.75	29.0	274	4.5
6 or More Persons	3.8	0.12	1.15	31.8	300	6.7
1997 Household Income Category						
Less than \$5,000	3.7	0.06	0.61	16.9	166	6.3
\$5,000 to \$9,999	9.4	0.14	1.47	15.4	157	4.9
\$10,000 to \$14,999	10.3	0.17	1.73	16.5	168	4.6
\$15,000 to \$19,999	10.3	0.17	1.90	16.2	184	4.3
\$20,000 to \$24,999	8.4	0.14	1.59	17.1	189	4.1
\$25,000 to \$34,999	15.6	0.29	3.04	18.3	195	3.3
\$35,000 to \$49,999	15.5	0.31	3.10	19.9	200	2.7
\$50,000 to \$74,999	16.4	0.36	3.67	21.9	224	3.6
\$75,000 or More	11.3	0.28	2.65	24.7	234	4.4
Below Poverty Line						
100 Percent	14.4	0.27	2.71	18.8	189	3.7
125 Percent	19.3	0.36	3.69	18.5	191	3.5
150 Percent	26.4	0.49	5.12	18.4	194	3.0
Eligible for Federal Assistance¹						
	33.7	0.61	6.40	18.1	190	2.6
Age of Householder						
Under 25 Years	5.7	0.10	1.12	18.4	198	5.7
25 to 34 Years	18.4	0.37	3.86	20.3	210	3.1
35 to 44 Years	23.0	0.52	5.26	22.4	229	2.5
45 to 59 Years	25.4	0.51	5.29	20.2	208	2.3
60 Years and Over	28.4	0.41	4.24	14.5	149	2.7
Race of Householder						
White	78.1	1.43	15.07	18.3	193	1.5
Black	12.6	0.28	2.75	22.0	218	4.4
Other ²	10.1	0.21	1.95	21.1	192	5.1
Householder of Hispanic Descent						
Yes	9.3	0.20	1.82	21.1	197	5.6
No	91.5	1.72	17.94	18.8	196	1.5

¹ Below 150 percent of poverty line or 60 percent of median State income.

² Includes 5.4 million householders who described themselves as Hispanic rather than White, Black, or other.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE4-6u. Water-Heating Energy Consumption and Expenditures in U.S. Households by Usage Indicators, 1997

Usage Indicators	Water-Heating Energy					RSE Row Factors
	Households (millions)	Total		Per Household		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	
	RSE Column Factor:	1.2	1.4	1.3	0.7	
Total	100.8	1.92	19.76	19.0	196	1.4
Household Size						
1 Person	25.3	0.28	2.93	11.0	116	2.5
2 Persons	32.8	0.55	5.99	16.8	183	2.0
3 Persons	17.3	0.39	3.99	22.6	230	2.6
4 Persons	15.1	0.39	3.96	25.8	261	2.9
5 Persons	6.4	0.19	1.75	29.0	274	4.5
6 or More Persons	3.8	0.12	1.15	31.8	300	6.7
Someone Home All Day						
Yes	50.9	0.99	10.18	19.5	200	2.0
No	49.9	0.93	9.58	18.6	192	1.8
Number of Showers/Baths Taken Each Week						
Less than 10	28.1	0.35	3.49	12.6	124	2.1
10 to 20	46.5	0.90	9.40	19.3	202	1.8
21 or More	26.2	0.67	6.87	25.6	262	2.1
Dishwasher Use Each Week						
Use a Dishwasher	50.7	1.02	10.58	20.0	209	2.1
Less than 4 Times	28.6	0.47	5.30	16.5	185	2.6
4 to 6 Times	12.8	0.29	2.83	22.7	221	3.5
Once a Week	9.3	0.25	2.45	27.3	264	4.3
Loads of Laundry Washed Each Week						
Use a Clothes Washer	78.2	1.55	16.03	19.8	205	1.5
1 to 4 Loads	35.0	0.56	6.00	16.0	172	2.2
5 to 9 Loads	29.8	0.63	6.40	21.2	215	2.5
10 to 15 Loads	10.1	0.26	2.66	26.0	263	3.7
16 or More Loads	3.3	0.10	0.96	29.6	291	6.7
Age of Water Heater						
One Housing Unit						
Less than 2 Years	11.2	0.21	2.23	19.0	199	4.2
2 to 4 Years	17.0	0.34	3.55	20.2	209	3.3
5 to 9 Years	25.2	0.49	5.15	19.4	204	2.6
10 to 19 Years	20.2	0.36	4.00	17.9	198	3.2
20 Years or More	7.1	0.12	1.29	16.3	182	5.1
Don't Know	7.1	0.13	1.41	17.7	197	5.5
Water Heaters for Two or More Units						
More Units	10.0	0.20	1.60	20.4	160	4.7
No Separate Water Heater	7.9	0.15	1.24	19.7	159	5.7
Size of Water Heater						
One Housing Unit						
Small	15.5	0.23	2.75	14.9	177	3.5
Medium	47.1	0.90	9.19	19.0	195	1.9
Large	21.5	0.45	4.94	21.2	230	3.3
Don't Know	3.4	0.06	0.64	17.0	192	8.5
Water Heaters for Two or More Units						
More Units	10.0	0.20	1.60	20.4	160	4.7
No Separate Water Heater	7.9	0.15	1.24	19.7	159	5.7

See footnotes at end of table.

Table CE4-6u. Water-Heating Energy Consumption and Expenditures in U.S. Households by Usage Indicators, 1997 (Continued)

Usage Indicators	Water-Heating Energy					RSE Row Factors
	Households (millions)	Total		Per Household		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	
	RSE Column Factor:	1.2	1.4	1.3	0.7	
Average Electricity Cost for Water Heating (cents per kWh)						
Less than 6	6.1	0.08	1.15	12.3	187	6.9
6 to 8.99	23.4	0.24	5.29	10.2	226	3.7
9 or More	10.7	0.09	2.67	8.3	250	5.6
Average Natural Gas Cost for Water Heating (dollars per 1000 cf)						
Less than 4.50	1.4	0.05	0.18	34.1	132	17.2
4.50 to 5.99	13.0	0.35	1.83	26.7	141	5.4
6 or More	38.5	0.90	6.86	23.5	179	3.1
Average Fuel Oil Cost for Water Heating (dollars per gallon)						
Less than .95	2.2	0.07	0.35	30.7	160	5.9
.95 to 1.09	2.5	0.08	0.58	30.7	233	9.3
1.10 or More	0.5	0.02	0.15	33.1	295	14.2
Average LPG Cost for Water Heating (dollars per gallon)						
Less than .75	0.3	0.01	0.06	28.2	203	24.2
.75 to .99	1.3	0.03	0.34	26.5	265	11.5
1.00 or More	1.6	0.04	0.50	22.3	315	9.6
Main Water Heating Fuel Paid by Household						
All Major Fuels¹						
Yes	89.2	1.68	17.98	18.8	202	1.5
No	11.4	0.24	1.77	20.7	155	4.4
Electricity						
Yes	38.2	0.38	8.77	10.0	230	2.5
No	1.4	0.01	0.24	7.2	166	15.8
Natural Gas						
Yes	45.1	1.13	7.72	25.1	171	2.6
No	7.6	0.16	1.11	21.1	147	5.0
Fuel Oil						
Yes	3.2	0.10	0.71	30.5	224	7.5
No	1.9	0.06	0.32	30.6	165	6.9
LPG						
Yes	3.2	0.08	0.87	23.9	274	7.5
No	Q	Q	Q	Q	Q	NF
Kerosene						
Yes	Q	Q	Q	Q	Q	NF
No	Q	Q	Q	Q	Q	NF

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See

"Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE4-7c. Water-Heating Energy Consumption in U.S. Households
by Four Most Populated States, 1997**

	Four Most Populated States					RSE Row Factors
	Total U.S.	New York	California	Texas	Florida	
	0.4	1.3	1.1	1.2	1.4	
Million Households						
Total U.S. Households	101.5	6.8	11.5	7.0	5.9	NF
No Water Heating	0.2	Q	Q	Q	Q	88.2
Water Heating	101.3	6.8	11.4	6.9	5.9	NF
Not Using a Major Fuel ¹	0.5	Q	Q	Q	Q	65.2
Using a Major Fuel ¹	100.8	6.8	11.4	6.9	5.8	NF
For Main Water Heating	100.6	6.8	11.4	6.9	5.7	0.9
Number of Households with Water Heating, Major Fuels Used:						
Electricity	40.2	1.0	2.0	2.4	4.7	10.4
Natural Gas	52.8	3.4	9.3	4.3	0.9	8.0
Fuel Oil	5.2	2.2	Q	Q	Q	15.2
Kerosene	Q	Q	Q	Q	Q	NF
LPG	3.2	0.2	0.3	0.2	Q	26.9
Quadrillion Btu						
Water-Heating Btu Consumption, Major Fuels Used:						
Electricity	0.39	0.01	0.01	0.03	0.04	12.6
Natural Gas	1.29	0.08	0.21	0.11	0.01	10.8
Fuel Oil	0.16	0.07	Q	Q	Q	15.3
Kerosene	Q	Q	Q	Q	Q	NF
LPG	0.08	0.01	0.01	0.01	Q	26.3
Total	1.92	0.17	0.24	0.14	0.06	4.2
Physical Units						
Physical Units of Water-Heating Consumption, Major Fuels Used:						
Electricity (billion kWh)	114	3	4	7	12	12.6
Natural Gas (billion cf)	1,260	80	208	109	14	10.8
Fuel Oil (million gallons)	1,139	523	Q	Q	Q	15.3
Kerosene (million gallons)	Q	Q	Q	Q	Q	NF
LPG (million gallons)	847	65	84	65	Q	26.3
Million Btu per Household						
Average Water-Heating Btu Consumption per Household						
Using a Major Fuel ¹	19.0	25.1	20.7	20.5	9.8	4.2
For Main Water Heating	19.1	25.1	20.7	20.5	9.8	4.2

See footnotes at end of table.

Table CE4-7c. Water-Heating Energy Consumption in U.S. Households by Four Most Populated States, 1997 (Continued)

	Total U.S.	Four Most Populated States				RSE Row Factors
		New York	California	Texas	Florida	
RSE Column Factor:	0.4	1.3	1.1	1.2	1.4	
Million Households						
Number of Households, Where the Main Water-Heating Fuel Is:						
Electricity	39.6	1.0	1.8	2.4	4.7	10.8
Natural Gas	52.6	3.3	9.3	4.3	0.9	8.0
Fuel Oil	5.1	2.2	Q	Q	Q	15.2
Kerosene	Q	Q	Q	Q	Q	NF
LPG	3.1	0.2	0.3	0.2	Q	27.0
No Water Heating	0.2	Q	Q	Q	Q	88.2
Million Btu per Household³						
Water-Heating Btu Consumption per Household,² Where the Main Water-Heating Fuel Is:						
Electricity	9.8	9.2	8.0	10.4	8.8	4.1
Natural Gas	24.6	24.7	22.9	26.0	15.2	4.2
Fuel Oil	30.6	33.2	Q	Q	Q	4.4
Kerosene	Q	Q	Q	Q	Q	NF
LPG	24.4	28.6	25.0	25.2	Q	11.4
Physical Units (PU) per Household³						
Physical Units of Water-Heating Consumption per Household,² Where the Main Water-Heating Fuel Is:						
Electricity (kWh)	2,871	2,696	2,349	3,049	2,568	4.1
Natural Gas (thousand cf)	24	24	22	25	15	4.2
Fuel Oil (gallons)	221	240	Q	Q	Q	4.4
Kerosene (gallons)	Q	Q	Q	Q	Q	NF
LPG (gallons)	267	313	273	275	Q	11.4
Number of Household Members (NHM) per Household³						
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:						
Electricity	2.5	2.4	2.6	2.4	2.6	3.8
Natural Gas	2.7	2.5	2.8	3.0	2.4	4.7
Fuel Oil	2.4	2.5	Q	Q	Q	2.9
Kerosene	Q	Q	Q	Q	Q	NF
LPG	2.6	2.6	2.8	3.2	Q	13.7

See footnotes at end of table.

Table CE4-7c. Water-Heating Energy Consumption in U.S. Households by Four Most Populated States, 1997 (Continued)

	Four Most Populated States					RSE Row Factors
	Total U.S.	New York	California	Texas	Florida	
RSE Column Factor:	0.4	1.3	1.1	1.2	1.4	
Water-Heating Intensity (PU÷NHM)³						
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:						
Electricity	1,169	1,105	910	1,247	1,006	4.0
Natural Gas	8.8	9.8	7.9	8.3	6.1	4.4
Fuel Oil	90	98	Q	Q	Q	6.2
Kerosene	Q	Q	Q	Q	Q	NF
LPG	103	118	99	87	Q	14.3

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the water-heating consumption of the water-heating fuel. Not included are: 1) the consumption of the main water-heating fuel for uses other than water heating; 2) the consumption of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the consumption of other fuels that are used as secondary water-heating fuels.

³ Averages are for those households using each of the main water-heating fuels.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE4-8c. Water-Heating Energy Consumption in U.S. Households
by Urban/Rural Location, 1997**

	Urban/Rural Location ¹					RSE Row Factors
	Total	City	Town	Suburbs	Rural	
	0.6	1.0	1.3	1.2	1.2	
Million Households						
Total U.S. Households	101.5	48.2	18.2	18.6	16.5	4.1
No Water Heating	0.2	Q	Q	Q	Q	61.1
Water Heating	101.3	48.2	18.2	18.6	16.4	4.1
Not Using a Major Fuel ²	0.5	0.3	Q	Q	Q	39.9
Using a Major Fuel ²	100.8	47.8	18.2	18.6	16.2	4.1
For Main Water Heating	100.6	47.8	18.1	18.5	16.2	4.1
Number of Households with Water Heating, Major Fuels Used:						
Electricity	40.2	15.2	7.7	6.7	10.6	6.3
Natural Gas	52.8	30.5	8.7	10.9	2.6	6.2
Fuel Oil	5.2	2.1	1.2	0.9	0.9	13.0
Kerosene	Q	Q	Q	Q	Q	NF
LPG	3.2	0.3	0.6	Q	2.2	17.5
Quadrillion Btu						
Water-Heating Btu Consumption, Major Fuels Used:						
Electricity	0.39	0.13	0.07	0.07	0.11	6.9
Natural Gas	1.29	0.74	0.21	0.28	0.06	6.8
Fuel Oil	0.16	0.06	0.04	0.03	0.03	13.8
Kerosene	Q	Q	Q	Q	Q	NF
LPG	0.08	0.01	0.01	Q	0.06	17.9
Total	1.92	0.95	0.33	0.37	0.27	4.1
Physical Units						
Physical Units of Water-Heating Consumption, Major Fuels Used:						
Electricity (billion kWh)	114	39	22	19	34	6.9
Natural Gas (billion cf)	1,260	725	203	272	60	6.8
Fuel Oil (million gallons)	1,139	450	266	191	232	13.8
Kerosene (million gallons)	Q	Q	Q	Q	Q	NF
LPG (million gallons)	847	58	153	Q	616	17.9
Million Btu per Household						
Average Water-Heating Btu Consumption per Household						
Using a Major Fuel ²	19.0	19.8	18.4	20.1	16.3	2.3
For Main Water Heating	19.1	19.8	18.4	20.2	16.3	2.3

See footnotes at end of table.

Table CE4-8c. Water-Heating Energy Consumption in U.S. Households by Urban/Rural Location, 1997 (Continued)

	Total	Urban/Rural Location ¹				RSE Row Factors
		City	Town	Suburbs	Rural	
RSE Column Factor:	0.6	1.0	1.3	1.2	1.2	
Million Households						
Number of Households, Where the Main Water-Heating Fuel Is:						
Electricity	39.6	14.9	7.6	6.6	10.5	6.3
Natural Gas	52.6	30.5	8.7	10.9	2.5	6.1
Fuel Oil	5.1	2.1	1.2	0.9	0.9	13.2
Kerosene	Q	Q	Q	Q	Q	NF
LPG	3.1	0.3	0.6	Q	2.1	17.9
No Water Heating	0.2	Q	Q	Q	Q	61.1
Million Btu per Household⁴						
Water-Heating Btu Consumption per Household,³ Where the Main Water-Heating Fuel Is:						
Electricity	9.8	9.0	9.7	9.8	10.9	2.1
Natural Gas	24.6	24.4	23.9	25.6	24.1	2.3
Fuel Oil	30.6	29.6	29.8	30.3	34.2	4.4
Kerosene	Q	Q	Q	Q	Q	NF
LPG	24.4	18.3	22.0	Q	26.1	10.2
Physical Units (PU) per Household⁴						
Physical Units of Water-Heating Consumption per Household,³ Where the Main Water-Heating Fuel Is:						
Electricity (kWh)	2,871	2,644	2,846	2,887	3,202	2.1
Natural Gas (thousand cf)	24	24	23	25	24	2.3
Fuel Oil (gallons)	221	213	215	219	247	4.4
Kerosene (gallons)	Q	Q	Q	Q	Q	NF
LPG (gallons)	267	201	241	Q	286	10.2
Number of Household Members (NHM) per Household⁴						
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:						
Electricity	2.5	2.3	2.4	2.4	2.7	2.4
Natural Gas	2.7	2.7	2.7	2.8	2.7	2.5
Fuel Oil	2.4	2.2	2.4	2.8	2.7	4.3
Kerosene	Q	Q	Q	Q	Q	NF
LPG	2.6	2.8	1.9	Q	2.8	7.7

See footnotes at end of table.

Table CE4-8c. Water-Heating Energy Consumption in U.S. Households by Urban/Rural Location, 1997 (Continued)

	Total	Urban/Rural Location ¹				RSE Row Factors
		City	Town	Suburbs	Rural	
RSE Column Factor:	0.6	1.0	1.3	1.2	1.2	
Water-Heating Intensity (PU±NHM)⁴						
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:						
Electricity	1,169	1,132	1,167	1,191	1,206	2.0
Natural Gas	8.8	8.9	8.5	8.9	8.6	2.3
Fuel Oil	90	96	90	78	92	5.8
Kerosene	Q	Q	Q	Q	Q	NF
LPG	103	72	123	Q	103	9.9

¹ Based on the household respondent's description rather than the Federal Government definition.

² The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

³ Includes only the water-heating consumption of the water-heating fuel. Not included are: 1) the consumption of the main water-heating fuel for uses other than water heating; 2) the consumption of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the consumption of other fuels that are used as secondary water-heating fuels.

⁴ Averages are for those households using each of the main water-heating fuels.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE4-9c. Water-Heating Energy Consumption in U.S. Households by Northeast Census Region, 1997

	Northeast Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Middle Atlantic	New England	
	RSE Column Factor:	0.5	1.0	1.2	
Million Households					
Total U.S. Households	101.5	19.7	14.4	5.3	NF
No Water Heating	0.2	Q	Q	Q	66.4
Water Heating	101.3	19.7	14.4	5.3	NF
Not Using a Major Fuel ¹	0.5	Q	Q	Q	49.1
Using a Major Fuel ¹	100.8	19.6	14.3	5.3	0.6
For Main Water Heating	100.6	19.6	14.3	5.3	0.6
Number of Households with Water Heating, Major Fuels Used:					
Electricity	40.2	5.2	3.5	1.7	8.6
Natural Gas	52.8	9.2	7.6	1.6	9.1
Fuel Oil	5.2	4.9	3.1	1.8	9.6
Kerosene	Q	Q	Q	Q	NF
LPG	3.2	0.4	0.3	0.1	22.2
Quadrillion Btu					
Water-Heating Btu Consumption, Major Fuels Used:					
Electricity	0.39	0.05	0.03	0.01	8.5
Natural Gas	1.29	0.21	0.17	0.04	9.9
Fuel Oil	0.16	0.15	0.10	0.06	10.5
Kerosene	Q	Q	Q	Q	NF
LPG	0.08	0.01	0.01	(*)	20.9
Total	1.92	0.42	0.31	0.11	2.6
Physical Units					
Physical Units of Water-Heating Consumption, Major Fuels Used:					
Electricity (billion kWh)	114	14	10	4	8.5
Natural Gas (billion cf)	1,260	205	169	36	9.9
Fuel Oil (million gallons)	1,139	1,093	691	402	10.5
Kerosene (million gallons)	Q	Q	Q	Q	NF
LPG (million gallons)	847	105	81	24	20.9
Million Btu per Household					
Average Water-Heating Btu Consumption per Household					
Using a Major Fuel ¹	19.0	21.4	21.6	20.9	2.7
For Main Water Heating	19.1	21.4	21.6	20.9	2.7

See footnotes at end of table.

Table CE4-9c. Water-Heating Energy Consumption in U.S. Households by Northeast Census Region, 1997 (Continued)

	Northeast Census Region				RSE Row Factors
	Total U.S.	Census Division			
		Total	Middle Atlantic	New England	
RSE Column Factor:	0.5	1.0	1.2	1.7	
Million Households					
Number of Households, Where the Main Water-Heating Fuel Is:					
Electricity	39.6	5.1	3.4	1.7	8.7
Natural Gas	52.6	9.1	7.5	1.6	9.1
Fuel Oil	5.1	4.8	3.0	1.8	9.5
Kerosene	Q	Q	Q	Q	NF
LPG	3.1	0.4	0.3	0.1	23.7
No Water Heating	0.2	Q	Q	Q	66.4
Million Btu per Household³					
Water-Heating Btu Consumption per Household,² Where the Main Water-Heating Fuel Is:					
Electricity	9.8	9.4	9.7	8.7	3.4
Natural Gas	24.6	22.9	22.9	22.8	2.9
Fuel Oil	30.6	30.9	31.2	30.3	3.5
Kerosene	Q	Q	Q	Q	NF
LPG	24.4	23.9	26.4	17.7	8.6
Physical Units (PU) per Household³					
Physical Units of Water-Heating Consumption per Household,² Where the Main Water-Heating Fuel Is:					
Electricity (kWh)	2,871	2,746	2,841	2,555	3.4
Natural Gas (thousand cf)	24	22	22	22	2.9
Fuel Oil (gallons)	221	223	225	219	3.5
Kerosene (gallons)	Q	Q	Q	Q	NF
LPG (gallons)	267	261	289	194	8.6
Number of Household Members (NHM) per Household³					
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:					
Electricity	2.5	2.5	2.5	2.5	3.2
Natural Gas	2.7	2.5	2.5	2.8	2.7
Fuel Oil	2.4	2.5	2.5	2.4	2.8
Kerosene	Q	Q	Q	Q	NF
LPG	2.6	2.5	2.5	2.7	9.1

See footnotes at end of table.

Table CE4-9c. Water-Heating Energy Consumption in U.S. Households by Northeast Census Region, 1997 (Continued)

	Northeast Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Middle Atlantic	New England	
RSE Column Factor:	0.5	1.0	1.2	1.7	

Water-Heating Intensity (PU÷NHM)³

Water-Heating Intensity, Where the Main Water-Heating Fuel Is:					
Electricity	1,169	1,101	1,138	1,028	2.2
Natural Gas	8.8	8.8	9.0	8.0	3.6
Fuel Oil	90	90	89	93	4.8
Kerosene	Q	Q	Q	Q	NF
LPG	103	104	118	73	7.6

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the water-heating consumption of the water-heating fuel. Not included are: 1) the consumption of the main water-heating fuel for uses other than water heating; 2) the consumption of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the consumption of other fuels that are used as secondary water-heating fuels.

³ Averages are for those households using each of the main water-heating fuels.

(*) = Value rounds to zero in the units displayed.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE4-10c. Water-Heating Energy Consumption in U.S. Households
by Midwest Census Region, 1997**

	Midwest Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			East North Central	West North Central	
	0.5	1.0	1.1	1.7	
RSE Column Factor:					
Million Households					
Total U.S. Households	101.5	24.1	16.9	7.2	NF
No Water Heating	0.2	Q	Q	Q	67.0
Water Heating	101.3	24.1	16.9	7.2	NF
Not Using a Major Fuel ¹	0.5	Q	Q	Q	49.5
Using a Major Fuel ¹	100.8	23.9	16.8	7.1	NF
For Main Water Heating	100.6	23.9	16.8	7.1	NF
Number of Households with Water Heating, Major Fuels Used:					
Electricity	40.2	6.5	4.1	2.3	8.2
Natural Gas	52.8	16.3	12.1	4.2	4.8
Fuel Oil	5.2	Q	Q	Q	16.8
Kerosene	Q	Q	Q	Q	NF
LPG	3.2	1.1	0.6	0.6	18.3
Quadrillion Btu					
Water-Heating Btu Consumption, Major Fuels Used:					
Electricity	0.39	0.06	0.04	0.03	11.0
Natural Gas	1.29	0.43	0.32	0.10	4.9
Fuel Oil	0.16	Q	Q	Q	17.3
Kerosene	Q	Q	Q	Q	NF
LPG	0.08	0.03	0.02	0.01	18.3
Total	1.92	0.53	0.38	0.14	2.6
Physical Units					
Physical Units of Water-Heating Consumption, Major Fuels Used:					
Electricity (billion kWh)	114	19	12	7	11.0
Natural Gas (billion cf)	1,260	417	316	101	4.9
Fuel Oil (million gallons)	1,139	Q	Q	Q	17.4
Kerosene (million gallons)	Q	Q	Q	Q	NF
LPG (million gallons)	847	330	186	144	18.3
Million Btu per Household					
Average Water-Heating Btu Consumption per Household					
Using a Major Fuel ¹	19.0	22.0	22.7	20.3	2.5
For Main Water Heating	19.1	22.0	22.7	20.3	2.5

See footnotes at end of table.

Table CE4-10c. Water-Heating Energy Consumption in U.S. Households by Midwest Census Region, 1997 (Continued)

	Midwest Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			East North Central	West North Central	
	0.5	1.0	1.1	1.7	
Million Households					
Number of Households, Where the Main Water-Heating Fuel Is:					
Electricity	39.6	6.4	4.1	2.3	8.1
Natural Gas	52.6	16.3	12.1	4.2	4.8
Fuel Oil	5.1	Q	Q	Q	16.8
Kerosene	Q	Q	Q	Q	NF
LPG	3.1	1.1	0.6	0.6	18.4
No Water Heating	0.2	Q	Q	Q	67.0
Million Btu per Household³					
Water-Heating Btu Consumption per Household,² Where the Main Water-Heating Fuel Is:					
Electricity	9.8	10.1	9.7	10.9	4.0
Natural Gas	24.6	26.3	26.8	24.9	2.7
Fuel Oil	30.6	Q	Q	Q	5.8
Kerosene	Q	Q	Q	Q	NF
LPG	24.4	26.7	29.6	23.7	8.7
Physical Units (PU) per Household³					
Physical Units of Water-Heating Consumption per Household,² Where the Main Water-Heating Fuel Is:					
Electricity (kWh)	2,871	2,969	2,847	3,181	4.0
Natural Gas (thousand cf)	24	26	26	24	2.7
Fuel Oil (gallons)	221	Q	Q	Q	5.8
Kerosene (gallons)	Q	Q	Q	Q	NF
LPG (gallons)	267	292	324	260	8.7
Number of Household Members (NHM) per Household³					
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:					
Electricity	2.5	2.4	2.4	2.5	3.1
Natural Gas	2.7	2.7	2.7	2.6	2.5
Fuel Oil	2.4	Q	Q	Q	4.4
Kerosene	Q	Q	Q	Q	NF
LPG	2.6	2.5	2.7	2.2	6.2

See footnotes at end of table.

Table CE4-10c. Water-Heating Energy Consumption in U.S. Households by Midwest Census Region, 1997 (Continued)

	Midwest Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			East North Central	West North Central	
	0.5	1.0	1.1	1.7	
RSE Column Factor:					
Water-Heating Intensity (PU÷NHM)³					
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:					
Electricity	1,169	1,212	1,168	1,288	3.0
Natural Gas	8.8	9.6	9.7	9.2	2.3
Fuel Oil	90	Q	Q	Q	7.8
Kerosene	Q	Q	Q	Q	NF
LPG	103	118	119	116	6.2

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the water-heating consumption of the water-heating fuel. Not included are: 1) the consumption of the main water-heating fuel for uses other than water heating; 2) the consumption of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the consumption of other fuels that are used as secondary water-heating fuels.

³ Averages are for those households using each of the main water-heating fuels.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE4-11c. Water-Heating Energy Consumption in U.S. Households by South Census Region, 1997

	South Census Region					RSE Row Factors
	Total U.S.	Census Division			West South Central	
		Total	South Atlantic	East South Central		
RSE Column Factor:	0.5	0.8	1.3	1.4	1.4	
Million Households						
Total U.S. Households	101.5	35.9	18.7	6.3	10.8	NF
No Water Heating	0.2	Q	Q	Q	Q	71.5
Water Heating	101.3	35.8	18.6	6.3	10.8	NF
Not Using a Major Fuel ¹	0.5	Q	Q	Q	Q	52.8
Using a Major Fuel ¹	100.8	35.7	18.5	6.3	10.8	NF
For Main Water Heating	100.6	35.6	18.4	6.3	10.8	NF
Number of Households with Water Heating, Major Fuels Used:						
Electricity	40.2	21.0	12.9	4.2	4.0	6.0
Natural Gas	52.8	13.4	5.0	1.9	6.6	8.1
Fuel Oil	5.2	Q	Q	Q	Q	17.9
Kerosene	Q	Q	Q	Q	Q	NF
LPG	3.2	1.1	0.5	0.3	0.3	19.4
Quadrillion Btu						
Water-Heating Btu Consumption, Major Fuels Used:						
Electricity	0.39	0.21	0.12	0.05	0.04	7.3
Natural Gas	1.29	0.32	0.11	0.05	0.17	9.3
Fuel Oil	0.16	Q	Q	Q	Q	18.5
Kerosene	Q	Q	Q	Q	Q	NF
LPG	0.08	0.02	0.01	0.01	0.01	20.1
Total	1.92	0.56	0.24	0.10	0.22	3.5
Physical Units						
Physical Units of Water-Heating Consumption, Major Fuels Used:						
Electricity (billion kWh)	114	61	36	14	12	7.3
Natural Gas (billion cf)	1,260	315	107	44	164	9.3
Fuel Oil (million gallons)	1,139	Q	Q	Q	Q	18.5
Kerosene (million gallons)	Q	Q	Q	Q	Q	NF
LPG (million gallons)	847	255	100	71	84	20.1
Million Btu per Household						
Average Water-Heating Btu Consumption per Household						
Using a Major Fuel ¹	19.0	15.7	13.2	15.6	20.0	3.5
For Main Water Heating	19.1	15.7	13.3	15.6	20.0	3.4

See footnotes at end of table.

Table CE4-11c. Water-Heating Energy Consumption in U.S. Households by South Census Region, 1997 (Continued)

	South Census Region					RSE Row Factors
	Total U.S.	Census Division				
		Total	South Atlantic	East South Central	West South Central	
RSE Column Factor:	0.5	0.8	1.3	1.4	1.4	
Million Households						
Number of Households, Where the Main Water-Heating Fuel Is:						
Electricity	39.6	20.9	12.8	4.2	3.9	6.1
Natural Gas	52.6	13.4	4.9	1.9	6.6	8.1
Fuel Oil	5.1	Q	Q	Q	Q	18.0
Kerosene	Q	Q	Q	Q	Q	NF
LPG	3.1	1.1	0.5	0.3	0.3	20.3
No Water Heating	0.2	Q	Q	Q	Q	71.5
Million Btu per Household³						
Water-Heating Btu Consumption per Household,² Where the Main Water-Heating Fuel Is:						
Electricity	9.8	10.0	9.5	11.3	10.3	2.2
Natural Gas	24.6	24.1	22.1	24.0	25.7	2.9
Fuel Oil	30.6	Q	Q	Q	Q	6.2
Kerosene	Q	Q	Q	Q	Q	NF
LPG	24.4	20.8	18.1	22.6	23.4	6.9
Physical Units (PU) per Household³						
Physical Units of Water-Heating Consumption per Household,² Where the Main Water-Heating Fuel Is:						
Electricity (kWh)	2,871	2,931	2,784	3,315	3,004	2.2
Natural Gas (thousand cf)	24	23	22	23	25	2.9
Fuel Oil (gallons)	221	Q	Q	Q	Q	6.2
Kerosene (gallons)	Q	Q	Q	Q	Q	NF
LPG (gallons)	267	227	198	247	256	6.9
Number of Household Members (NHM) per Household³						
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:						
Electricity	2.5	2.5	2.5	2.6	2.4	2.0
Natural Gas	2.7	2.7	2.7	2.3	2.8	3.5
Fuel Oil	2.4	Q	Q	Q	Q	4.7
Kerosene	Q	Q	Q	Q	Q	NF
LPG	2.6	2.6	2.4	2.3	3.1	9.9

See footnotes at end of table.

Table CE4-11c. Water-Heating Energy Consumption in U.S. Households by South Census Region, 1997 (Continued)

	Total U.S.	South Census Region				RSE Row Factors
		Total	Census Division			
			South Atlantic	East South Central	West South Central	
RSE Column Factor:	0.5	0.8	1.3	1.4	1.4	

Water-Heating Intensity (PU÷NHH)³

Water-Heating Intensity, Where the Main Water-Heating Fuel Is:

Electricity	1,169	1,187	1,128	1,297	1,260	2.2
Natural Gas	8.8	8.7	8.1	10.0	8.8	3.2
Fuel Oil	90	Q	Q	Q	Q	8.3
Kerosene	Q	Q	Q	Q	Q	NF
LPG	103	88	82	106	84	12.4

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the water-heating consumption of the water-heating fuel. Not included are: 1) the consumption of the main water-heating fuel for uses other than water heating; 2) the consumption of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the consumption of other fuels that are used as secondary water-heating fuels.

³ Averages are for those households using each of the main water-heating fuels.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE4-12c. Water-Heating Energy Consumption in U.S. Households
by West Census Region, 1997**

	West Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Mountain	Pacific	
RSE Column Factor:	0.5	1.0	1.7	1.2	
Million Households					
Total U.S. Households	101.5	21.8	6.2	15.6	NF
No Water Heating	0.2	Q	Q	Q	71.4
Water Heating	101.3	21.8	6.2	15.6	NF
Not Using a Major Fuel ¹	0.5	Q	Q	Q	52.7
Using a Major Fuel ¹	100.8	21.6	6.1	15.5	NF
For Main Water Heating	100.6	21.6	6.1	15.5	NF
Number of Households with Water Heating, Major Fuels Used:					
Electricity	40.2	7.5	2.2	5.3	6.1
Natural Gas	52.8	13.9	3.8	10.1	3.4
Fuel Oil	5.2	Q	Q	Q	17.9
Kerosene	Q	Q	Q	Q	NF
LPG	3.2	0.5	Q	0.4	20.4
Quadrillion Btu					
Water-Heating Btu Consumption, Major Fuels Used:					
Electricity	0.39	0.07	0.02	0.05	6.6
Natural Gas	1.29	0.33	0.09	0.24	5.8
Fuel Oil	0.16	Q	Q	Q	18.5
Kerosene	Q	Q	Q	Q	NF
LPG	0.08	0.01	0.01	0.01	23.4
Total	1.92	0.41	0.12	0.30	3.8
Physical Units					
Physical Units of Water-Heating Consumption, Major Fuels Used:					
Electricity (billion kWh)	114	20	5	14	6.6
Natural Gas (billion cf)	1,260	324	91	233	5.8
Fuel Oil (million gallons)	1,139	Q	Q	Q	18.5
Kerosene (million gallons)	Q	Q	Q	Q	NF
LPG (million gallons)	847	157	62	95	23.4
Million Btu per Household					
Average Water-Heating Btu Consumption per Household					
Using a Major Fuel ¹	19.0	19.1	19.2	19.1	3.8
For Main Water Heating	19.1	19.1	19.2	19.1	3.8

See footnotes at end of table.

Table CE4-12c. Water-Heating Energy Consumption in U.S. Households by West Census Region, 1997 (Continued)

	West Census Region				RSE Row Factors
	Total U.S.	Census Division			
		Total	Mountain	Pacific	
RSE Column Factor:	0.5	1.0	1.7	1.2	
Million Households					
Number of Households, Where the Main Water-Heating Fuel Is:					
Electricity	39.6	7.2	2.1	5.1	6.3
Natural Gas	52.6	13.9	3.8	10.0	3.4
Fuel Oil	5.1	Q	Q	Q	17.9
Kerosene	Q	Q	Q	Q	NF
LPG	3.1	0.5	Q	0.4	20.5
No Water Heating	0.2	Q	Q	Q	71.4
Million Btu per Household³					
Water-Heating Btu Consumption per Household,² Where the Main Water-Heating Fuel Is:					
Electricity	9.8	9.2	8.7	9.4	2.8
Natural Gas	24.6	24.0	24.4	23.8	3.5
Fuel Oil	30.6	Q	Q	Q	6.2
Kerosene	Q	Q	Q	Q	NF
LPG	24.4	27.1	32.2	24.6	11.4
Physical Units (PU) per Household³					
Physical Units of Water-Heating Consumption per Household,² Where the Main Water-Heating Fuel Is:					
Electricity (kWh)	2,871	2,699	2,552	2,761	2.8
Natural Gas (thousand cf)	24	23	24	23	3.5
Fuel Oil (gallons)	221	Q	Q	Q	6.2
Kerosene (gallons)	Q	Q	Q	Q	NF
LPG (gallons)	267	297	353	269	11.4
Number of Household Members (NHM) per Household³					
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:					
Electricity	2.5	2.4	2.4	2.4	3.4
Natural Gas	2.7	2.8	2.8	2.9	2.6
Fuel Oil	2.4	Q	Q	Q	4.7
Kerosene	Q	Q	Q	Q	NF
LPG	2.6	3.0	3.2	2.8	9.0

See footnotes at end of table.

Table CE4-12c. Water-Heating Energy Consumption in U.S. Households by West Census Region, 1997 (Continued)

	West Census Region				RSE Row Factors
	Total U.S.	Census Division			
		Total	Mountain	Pacific	
RSE Column Factor:	0.5	1.0	1.7	1.2	
Water-Heating Intensity (PU÷NHM)³					
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:					
Electricity	1,169	1,130	1,065	1,157	3.2
Natural Gas	8.8	8.2	8.5	8.1	3.0
Fuel Oil	90	Q	Q	Q	8.3
Kerosene	Q	Q	Q	Q	NF
LPG	103	100	110	95	10.0

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the water-heating consumption of the water-heating fuel. Not included are: 1) the consumption of the main water-heating fuel for uses other than water heating; 2) the consumption of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the consumption of other fuels that are used as secondary water-heating fuels.

³ Averages are for those households using each of the main water-heating fuels.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

1997 Consumption and Expenditures Tables

Water-Heating Expenditures Tables

(20 pages, 67 kb)

Contents	Pages
CE4-1e. Water-Heating Energy Expenditures in U.S. Households by Climate Zone, 1997	2
CE4-2e. Water-Heating Energy Expenditures in U.S. Households by Year of Construction, 1997	2
CE4-3e. Water-Heating Energy Expenditures in U.S. Households by Household Income, 1997	2
CE4-4e. Water-Heating Energy Expenditures in U.S. Households by Type of Housing Unit, 1997	2
CE4-7e. Water-Heating Energy Expenditures in U.S. Households by Four Most Populated States, 1997	2
CE4-8e. Water-Heating Energy Expenditures in U.S. Households by Urban/Rural Location, 1997	2
CE4-9e. Water-Heating Energy Expenditures in U.S. Households by Northeast Census Region, 1997	2
CE4-10e. Water-Heating Energy Expenditures in U.S. Households by Midwest Census Region, 1997	2
CE4-11e. Water-Heating Energy Expenditures in U.S. Households by South Census Region, 1997	2
CE4-12e. Water-Heating Energy Expenditures in U.S. Households by West Census Region, 1997	2

These data are from the 1997 Residential Energy Consumption Survey (RECS) which provides information on the use of energy in residential housing units in the United States. The RECS is a national statistical survey that collects data for occupied primary housing units. RECS was first conducted in 1978; the sixth and most recent survey was conducted in 1997 RECS. The data were collected from a sample of 5,900 housing units statistically selected to represent the 101.5 million units in the United States. The 1997 data are available for the four Census regions, the nine Census divisions, and for the four most populous States--California, Florida, New York, and Texas.

Data provided here are in the public domain and may be reproduced without permission. Appropriate credit would be appreciated. A suggested citation is "U.S. Department of Energy, Energy Information Administration, *"A Look at Residential Energy Consumption in 1997."*

Electronic Products and Services

Users can view and download selected pages or entire reports, search for information, download data and analysis applications, and find out about new information products and services.

Contact: Robert Latta, Survey Manager (rlatta@eia.doe.gov)

World Wide Web: <http://www.eia.doe.gov/emeu/consumption>

Table CE4-1e. Water-Heating Energy Expenditures in U.S. Households by Climate Zone, 1997

	Climate Zone ¹						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factor:	0.4	1.6	1.2	1.1	1.1	1.0	
Million Households							
Total U.S. Households	101.5	9.3	28.0	22.5	19.5	22.2	8.1
No Water Heating	0.2	Q	Q	Q	Q	Q	77.4
Water Heating	101.3	9.3	28.0	22.5	19.5	22.1	8.1
Not Using a Major Fuel ²	0.5	Q	Q	Q	Q	Q	57.2
Using a Major Fuel ²	100.8	9.2	27.9	22.3	19.4	21.9	8.2
For Main Water Heating	100.6	9.1	27.9	22.3	19.4	21.9	8.2
Number of Households with Water Heating, Major Fuels Used:							
Electricity	40.2	3.7	7.9	9.1	7.8	11.8	10.2
Natural Gas	52.8	4.2	17.8	9.9	11.2	9.7	8.8
Fuel Oil	5.2	0.8	1.6	2.7	Q	Q	16.9
Kerosene	Q	Q	Q	Q	Q	Q	NF
LPG	3.2	0.5	0.8	0.7	0.6	0.5	24.4
Billion Dollars							
Water-Heating Expenditures, Major Fuels Used:							
Electricity	8.99	0.80	1.84	2.10	1.69	2.57	10.7
Natural Gas	8.84	0.63	3.00	1.78	1.83	1.60	9.5
Fuel Oil	1.04	0.16	0.33	0.54	Q	Q	17.4
Kerosene	Q	Q	Q	Q	Q	Q	NF
LPG	0.89	0.15	0.23	0.21	0.18	0.12	24.1
Total	19.76	1.74	5.40	4.63	3.70	4.28	6.9
Dollars per Household							
Average Water-Heating Expenditures per Household							
Using a Major Fuel ²	196	190	194	207	191	195	2.5
For Main Water Heating	196	190	194	207	191	196	2.5
Million Households							
Number of Households, Where the Main Water-Heating Fuel Is:							
Electricity	39.6	3.7	7.7	9.0	7.6	11.6	10.3
Natural Gas	52.6	4.2	17.8	9.8	11.2	9.7	8.8
Fuel Oil	5.1	0.8	1.6	2.7	Q	Q	17.0
Kerosene	Q	Q	Q	Q	Q	Q	NF
LPG	3.1	0.5	0.8	0.7	0.6	0.5	24.8
Does Not Heat Water	0.2	Q	Q	Q	Q	Q	77.4

See footnotes at end of table.

Table CE4-1e. Water-Heating Energy Expenditures in U.S. Households by Climate Zone, 1997 (Continued)

	Climate Zone ¹						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factor:	0.4	1.6	1.2	1.1	1.1	1.0	
Dollars per Household							
Water-Heating Expenditures per Household,³ Where the Main Water-Heating Fuel Is:							
Electricity	227	218	238	233	221	220	3.5
Natural Gas	168	149	169	181	163	165	3.1
Fuel Oil	201	218	202	196	Q	Q	4.7
Kerosene	Q	Q	Q	Q	Q	Q	NF
LPG	279	304	276	291	290	225	9.2
Number of Household Members (NHM) per Household⁴							
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:							
Electricity	2.5	2.5	2.4	2.5	2.4	2.5	3.1
Natural Gas	2.7	2.7	2.7	2.5	2.8	2.8	2.8
Fuel Oil	2.4	2.3	2.4	2.5	Q	Q	3.6
Kerosene	Q	Q	Q	Q	Q	Q	NF
LPG	2.6	2.9	2.5	2.3	2.6	2.9	8.5
Water-Heating Intensity (Dollars÷NHM)⁴							
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:							
Electricity	92	86	101	93	91	89	3.7
Natural Gas	62	55	62	73	58	59	3.0
Fuel Oil	82	94	83	79	Q	Q	6.1
Kerosene	Q	Q	Q	Q	Q	Q	NF
LPG	107	106	111	124	112	77	8.4

¹ One of five climatically distinct areas, determined according to the 30-year average (1961-1990) of the annual heating and cooling degree-days. For this report, the heating or cooling degree-days are a measure of how cold or how hot a location is over a period of one year, relative to a base temperature of 65 degrees Fahrenheit. A household is assigned to a climate zone according to the 30-year average annual degree-days for an appropriate nearby weather station.

² The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

³ Includes only the water-heating expenditures of the water-heating fuel. Not included are: 1) the expenditures of the main water-heating fuel for uses other than water heating; 2) the expenditures of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the expenditures of other fuels that are used as secondary water-heating fuels.

⁴ Averages are for those households using each of the main water-heating fuels.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE4-2e. Water-Heating Energy Expenditures in U.S. Households
by Year of Construction, 1997**

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ¹	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.6	1.3	1.0	1.0	1.1	0.9	
Million Households								
Total U.S. Households	101.5	9.7	17.3	19.6	14.4	12.5	27.9	4.2
No Water Heating	0.2	Q	Q	Q	Q	Q	Q	71.9
Water Heating	101.3	9.7	17.3	19.5	14.4	12.5	27.8	4.2
Not Using a Major Fuel ²	0.5	Q	Q	Q	Q	Q	Q	53.1
Using a Major Fuel ²	100.8	9.7	17.2	19.4	14.3	12.5	27.7	4.2
For Main Water Heating	100.6	9.7	17.2	19.3	14.3	12.5	27.7	4.2
Number of Households with Water Heating, Major Fuels Used:								
Electricity	40.2	4.7	10.1	10.2	4.9	3.6	6.7	6.6
Natural Gas	52.8	4.6	6.4	8.3	8.3	7.8	17.5	6.4
Fuel Oil	5.2	Q	0.4	0.5	0.8	1.0	2.4	17.6
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	3.2	0.2	0.5	0.6	0.4	0.3	1.2	18.3
Billion Dollars								
Water-Heating Expenditures, Major Fuels Used:								
Electricity	8.99	1.07	2.19	2.35	1.03	0.77	1.58	7.3
Natural Gas	8.84	0.88	1.17	1.32	1.31	1.30	2.87	7.1
Fuel Oil	1.04	Q	0.09	0.08	0.17	0.20	0.48	18.0
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	0.89	0.08	0.17	0.15	0.12	0.05	0.32	20.3
Total	19.76	2.04	3.62	3.90	2.63	2.32	5.25	4.2
Dollars per Household								
Average Water-Heating Expenditures per Household								
Using a Major Fuel ²	196	211	210	202	184	185	190	2.2
For Main Water Heating	196	211	210	202	184	185	190	2.2
Million Households								
Number of Households, Where the Main Water-Heating Fuel Is:								
Electricity	39.6	4.7	10.0	10.0	4.8	3.5	6.6	6.7
Natural Gas	52.6	4.6	6.3	8.2	8.3	7.7	17.4	6.5
Fuel Oil	5.1	Q	0.4	0.4	0.8	1.0	2.4	17.9
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	3.1	0.2	0.5	0.5	0.4	0.3	1.2	18.6
Does Not Heat Water	0.2	Q	Q	Q	Q	Q	Q	71.9

See footnotes at end of table.

Table CE4-2e. Water-Heating Energy Expenditures in U.S. Households by Year of Construction, 1997 (Continued)

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ¹	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.5	1.6	1.3	1.0	1.0	1.1	0.9	
Dollars per Household								
Water-Heating Expenditures per Household,³ Where the Main Water-Heating Fuel Is:								
Electricity	227	226	219	234	214	219	239	3.0
Natural Gas	168	191	184	159	158	167	164	3.0
Fuel Oil	201	Q	239	175	202	207	197	7.7
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	279	337	328	270	289	187	266	8.8
Number of Household Members (NHM) per Household⁴								
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:								
Electricity	2.5	2.6	2.4	2.5	2.3	2.4	2.5	3.0
Natural Gas	2.7	3.0	2.9	2.7	2.6	2.7	2.6	2.9
Fuel Oil	2.4	Q	2.4	2.4	2.4	2.4	2.5	7.6
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	2.6	3.5	3.1	2.7	2.5	2.1	2.3	10.0
Water-Heating Intensity (Dollars÷NHM)⁴								
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:								
Electricity	92	85	92	93	94	91	96	2.8
Natural Gas	62	63	63	60	62	61	63	3.1
Fuel Oil	82	Q	98	73	84	86	79	9.7
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	107	96	105	101	115	88	116	9.4

¹ New construction for 1997 includes only those housing units built and occupied between January and the April-August period when the household interviews were conducted.

² The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

³ Includes only the water-heating expenditures of the water-heating fuel. Not included are: 1) the expenditures of the main water-heating fuel for uses other than water heating; 2) the expenditures of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the expenditures of other fuels that are used as secondary water-heating fuels.

⁴ Averages are for those households using each of the main water-heating fuels.
 NF = No applicable RSE row factor.
 Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE4-3e. Water-Heating Energy Expenditures in U.S. Households by Household Income, 1997

	Total	1997 Household Income				Below Poverty Line	Eligible for Federal Assistance ¹	RSE Row Factors
		Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.6	1.5	1.0	0.9	1.0	1.4	1.0	
Million Households								
Total U.S. Households	101.5	13.3	29.1	31.1	27.9	14.6	34.1	2.7
No Water Heating	0.2	Q	Q	Q	Q	Q	Q	57.0
Water Heating	101.3	13.2	29.1	31.1	27.9	14.6	33.9	2.8
Not Using a Major Fuel ²	0.5	Q	Q	Q	Q	0.2	0.2	37.3
Using a Major Fuel ²	100.8	13.0	29.0	31.0	27.7	14.4	33.7	2.8
For Main Water Heating	100.6	13.0	29.0	31.0	27.6	14.4	33.7	2.8
Number of Households with Water Heating, Major Fuels Used:								
Electricity	40.2	5.4	12.8	12.5	9.4	5.7	13.9	5.3
Natural Gas	52.8	6.2	14.1	16.1	16.3	7.3	16.8	4.9
Fuel Oil	5.2	1.0	1.3	1.5	1.4	0.9	2.0	11.1
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	3.2	0.4	1.0	1.0	0.8	0.5	1.1	15.9
Billion Dollars								
Water-Heating Expenditures, Major Fuels Used:								
Electricity	8.99	0.94	2.66	2.85	2.53	1.25	3.06	6.1
Natural Gas	8.84	0.90	2.11	2.70	3.14	1.19	2.70	5.6
Fuel Oil	1.04	0.16	0.20	0.32	0.36	0.17	0.36	12.2
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	0.89	0.08	0.25	0.27	0.30	0.10	0.28	16.9
Total	19.76	2.08	5.22	6.14	6.33	2.71	6.40	3.0
Dollars per Household								
Average Water-Heating Expenditures per Household								
Using a Major Fuel ²	196	160	180	198	228	189	190	1.8
For Main Water Heating	196	160	180	198	229	189	190	1.8
Million Households								
Number of Households, Where the Main Water-Heating Fuel Is:								
Electricity	39.6	5.4	12.6	12.4	9.2	5.7	13.8	5.4
Natural Gas	52.6	6.2	14.1	16.0	16.2	7.3	16.8	4.9
Fuel Oil	5.1	0.9	1.3	1.5	1.4	0.9	2.0	11.1
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	3.1	0.4	0.9	1.0	0.8	0.5	1.1	16.1
Does Not Heat Water	0.2	Q	Q	Q	Q	Q	Q	57.0

See footnotes at end of table.

Table CE4-3e. Water-Heating Energy Expenditures in U.S. Households by Household Income, 1997 (Continued)

	Total	1997 Household Income				Below Poverty Line	Eligible for Federal Assistance ¹	RSE Row Factors
		Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.6	1.5	1.0	0.9	1.0	1.4	1.0	
Dollars per Household								
Water-Heating Expenditures per Household,³ Where the Main Water-Heating Fuel Is:								
Electricity	227	174	211	230	275	220	222	2.6
Natural Gas	168	144	149	168	193	164	161	2.4
Fuel Oil	201	167	161	207	256	183	181	6.3
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	279	195	254	258	382	203	247	7.9
Number of Household Members (NHM) per Household⁴								
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:								
Electricity	2.5	1.8	2.3	2.6	2.9	2.7	2.6	2.4
Natural Gas	2.7	2.2	2.4	2.7	3.1	3.2	2.8	2.4
Fuel Oil	2.4	2.0	2.0	2.5	3.1	2.4	2.3	5.4
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	2.6	1.7	2.7	2.4	3.2	2.7	2.6	8.1
Water-Heating Intensity (Dollars÷NHM)⁴								
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:								
Electricity	92	96	91	89	96	83	87	2.5
Natural Gas	62	65	61	61	62	52	57	2.5
Fuel Oil	82	84	81	82	82	76	79	7.3
Kerosene	Q	Q	Q	Q	Q	Q	Q	NF
LPG	107	118	94	107	118	77	94	8.9

¹ Below 150 percent of poverty line or 60 percent of median State income.

² The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

³ Includes only the water-heating expenditures of the water-heating fuel. Not included are: 1) the expenditures of the main water-heating fuel for uses other than water heating; 2) the expenditures of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the expenditures of other fuels that are used as secondary water-heating fuels.

⁴ Averages are for those households using each of the main water-heating fuels.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE4-4e. Water-Heating Energy Expenditures in U.S. Households by Type of Housing Unit, 1997

	Type of Housing Unit					RSE Row Factors
	Total	Single-Family	Multifamily		Mobile Home	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.5	0.5	1.9	1.2	1.6	
Million Households						
Total U.S. Households	101.5	73.7	5.6	15.8	6.3	4.0
No Water Heating	0.2	Q	Q	Q	Q	68.2
Water Heating	101.3	73.7	5.6	15.7	6.3	4.0
Not Using a Major Fuel ¹	0.5	0.3	Q	0.2	Q	45.5
Using a Major Fuel ¹	100.8	73.4	5.6	15.5	6.3	4.1
For Main Water Heating	100.6	73.3	5.6	15.5	6.3	4.1
Number of Households with Water Heating, Major Fuels Used:						
Electricity	40.2	27.1	1.8	7.0	4.3	7.2
Natural Gas	52.8	40.9	3.4	7.0	1.4	6.9
Fuel Oil	5.2	3.3	0.3	1.6	Q	15.7
Kerosene	Q	Q	Q	Q	Q	NF
LPG	3.2	2.6	Q	Q	0.5	17.3
Billion Dollars						
Water-Heating Expenditures, Major Fuels Used:						
Electricity	8.99	6.35	0.35	1.29	1.00	7.7
Natural Gas	8.84	7.08	0.55	1.02	0.19	7.8
Fuel Oil	1.04	0.73	0.06	0.25	Q	17.7
Kerosene	Q	Q	Q	Q	Q	NF
LPG	0.89	0.73	Q	Q	0.15	17.7
Total	19.76	14.89	0.97	2.57	1.34	4.0
Dollars per Household						
Average Water-Heating Expenditures per Household						
Using a Major Fuel ¹	196	203	173	165	213	2.3
For Main Water Heating	196	203	173	166	213	2.3
Million Households						
Number of Households, Where the Main Water-Heating Fuel Is:						
Electricity	39.6	26.6	1.8	6.9	4.3	7.3
Natural Gas	52.6	40.9	3.4	6.9	1.4	6.9
Fuel Oil	5.1	3.2	0.3	1.6	Q	15.8
Kerosene	Q	Q	Q	Q	Q	NF
LPG	3.1	2.6	Q	Q	0.5	17.6
Does Not Heat Water	0.2	Q	Q	Q	Q	68.2

See footnotes at end of table.

Table CE4-4e. Water-Heating Energy Expenditures in U.S. Households by Type of Housing Unit, 1997 (Continued)

	Type of Housing Unit					RSE Row Factors
	Total	Single-Family	Multifamily		Mobile Home	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.5	0.5	1.9	1.2	1.6	
Dollars per Household						
Water-Heating Expenditures per Household,² Where the Main Water-Heating Fuel Is:						
Electricity	227	238	191	187	232	3.1
Natural Gas	168	173	160	147	133	3.2
Fuel Oil	201	224	204	154	Q	6.2
Kerosene	Q	Q	Q	Q	Q	NF
LPG	279	281	Q	Q	269	6.9
Number of Household Members (NHM) per Household³						
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:						
Electricity	2.5	2.6	2.0	1.9	2.6	2.9
Natural Gas	2.7	2.8	2.4	2.1	2.3	3.1
Fuel Oil	2.4	2.6	1.6	2.2	Q	4.6
Kerosene	Q	Q	Q	Q	Q	NF
LPG	2.6	2.6	Q	Q	2.8	7.6
Water-Heating Intensity (Dollars÷NHM)³						
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:						
Electricity	92	92	95	96	91	2.8
Natural Gas	62	61	65	69	57	3.2
Fuel Oil	82	85	125	69	Q	7.8
Kerosene	Q	Q	Q	Q	Q	NF
LPG	107	110	Q	Q	95	8.1

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the water-heating expenditures of the water-heating fuel. Not included are: 1) the expenditures of the main water-heating fuel for uses other than water heating; 2) the expenditures of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the expenditures of other fuels that are used as secondary water-heating fuels.

³ Averages are for those households using each of the main water-heating fuels.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE4-7e. Water-Heating Energy Expenditures in U.S. Households by Four Most Populated States, 1997

	Total U.S.	Four Most Populated States				RSE Row Factors
		New York	California	Texas	Florida	
RSE Column Factor:	0.4	1.4	0.9	1.5	1.3	
Million Households						
Total U.S. Households	101.5	6.8	11.5	7.0	5.9	NF
No Water Heating	0.2	Q	Q	Q	Q	82.1
Water Heating	101.3	6.8	11.4	6.9	5.9	NF
Not Using a Major Fuel ¹	0.5	Q	Q	Q	Q	60.7
Using a Major Fuel ¹	100.8	6.8	11.4	6.9	5.8	NF
For Main Water Heating	100.6	6.8	11.4	6.9	5.7	1.0
Number of Households with Water Heating, Major Fuels Used:						
Electricity	40.2	1.0	2.0	2.4	4.7	10.4
Natural Gas	52.8	3.4	9.3	4.3	0.9	8.0
Fuel Oil	5.2	2.2	Q	Q	Q	14.5
Kerosene	Q	Q	Q	Q	Q	NF
LPG	3.2	0.2	0.3	0.2	Q	26.1
Billion Dollars						
Water-Heating Expenditures, Major Fuels Used:						
Electricity	8.99	0.33	0.46	0.55	0.99	12.6
Natural Gas	8.84	0.78	1.44	0.67	0.17	9.9
Fuel Oil	1.04	0.44	Q	Q	Q	15.9
Kerosene	Q	Q	Q	Q	Q	NF
LPG	0.89	0.09	0.10	0.06	Q	26.3
Total	19.76	1.65	2.00	1.28	1.19	3.0
Dollars per Household						
Average Water-Heating Expenditures per Household						
Using a Major Fuel ¹	196	244	175	185	206	2.9
For Main Water Heating	196	244	175	185	207	2.9
Million Households						
Number of Households, Where the Main Water-Heating Fuel Is:						
Electricity	39.6	1.0	1.8	2.4	4.7	10.8
Natural Gas	52.6	3.3	9.3	4.3	0.9	8.0
Fuel Oil	5.1	2.2	Q	Q	Q	14.6
Kerosene	Q	Q	Q	Q	Q	NF
LPG	3.1	0.2	0.3	0.2	Q	26.2
Does Not Heat Water	0.2	Q	Q	Q	Q	82.1
Dollars per Household						
Water-Heating Expenditures per Household,² Where the Main Water-Heating Fuel Is:						
Electricity	227	332	255	227	212	4.1
Natural Gas	168	234	155	157	189	3.4
Fuel Oil	201	204	Q	Q	Q	5.1
Kerosene	Q	Q	Q	Q	Q	NF
LPG	279	418	311	264	Q	10.5

See footnotes at end of table.

Table CE4-7e. Water-Heating Energy Expenditures in U.S. Households by Four Most Populated States, 1997 (Continued)

	Four Most Populated States				RSE Row Factors	
	Total U.S.	New York	California	Texas		Florida
RSE Column Factor:	0.4	1.4	0.9	1.5	1.3	
Number of Household Members (NHM) per Household³						
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:						
Electricity	2.5	2.4	2.6	2.4	2.6	3.8
Natural Gas	2.7	2.5	2.8	3.0	2.4	4.7
Fuel Oil	2.4	2.5	Q	Q	Q	2.8
Kerosene	Q	Q	Q	Q	Q	NF
LPG	2.6	2.6	2.8	3.2	Q	13.4
Water-Heating Intensity (Dollars÷NHM)³						
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:						
Electricity	92	136	99	93	83	4.1
Natural Gas	62	95	55	52	78	5.1
Fuel Oil	82	83	Q	Q	Q	6.9
Kerosene	Q	Q	Q	Q	Q	NF
LPG	107	158	112	83	Q	8.7

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the water-heating expenditures of the water-heating fuel. Not included are: 1) the expenditures of the main water-heating fuel for uses other than water heating; 2) the expenditures of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the expenditures of other fuels that are used as secondary water-heating fuels.

³ Averages are for those households using each of the main water-heating fuels.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE4-8e. Water-Heating Energy Expenditures in U.S. Households
by Urban/Rural Location, 1997**

	Urban/Rural Location ¹					RSE Row Factors
	Total	City	Town	Suburbs	Rural	
	0.6	0.9	1.3	1.2	1.2	
Million Households						
Total U.S. Households	101.5	48.2	18.2	18.6	16.5	4.1
No Water Heating	0.2	Q	Q	Q	Q	60.6
Water Heating	101.3	48.2	18.2	18.6	16.4	4.1
Not Using a Major Fuel ²	0.5	0.3	Q	Q	Q	40.4
Using a Major Fuel ²	100.8	47.8	18.2	18.6	16.2	4.2
For Main Water Heating	100.6	47.8	18.1	18.5	16.2	4.2
Number of Households with Water Heating, Major Fuels Used:						
Electricity	40.2	15.2	7.7	6.7	10.6	6.3
Natural Gas	52.8	30.5	8.7	10.9	2.6	6.2
Fuel Oil	5.2	2.1	1.2	0.9	0.9	13.0
Kerosene	Q	Q	Q	Q	Q	NF
LPG	3.2	0.3	0.6	Q	2.2	17.4
Billion Dollars						
Water-Heating Expenditures, Major Fuels Used:						
Electricity	8.99	3.13	1.76	1.53	2.57	6.9
Natural Gas	8.84	5.01	1.43	1.98	0.42	7.0
Fuel Oil	1.04	0.36	0.26	0.20	0.22	14.1
Kerosene	Q	Q	Q	Q	Q	NF
LPG	0.89	0.07	0.15	Q	0.64	18.1
Total	19.76	8.57	3.60	3.74	3.86	3.9
Dollars per Household						
Average Water-Heating Expenditures per Household						
Using a Major Fuel ²	196	179	198	202	238	1.8
For Main Water Heating	196	179	198	202	238	1.8
Million Households						
Number of Households, Where the Main Water-Heating Fuel Is:						
Electricity	39.6	14.9	7.6	6.6	10.5	6.3
Natural Gas	52.6	30.5	8.7	10.9	2.5	6.1
Fuel Oil	5.1	2.1	1.2	0.9	0.9	13.2
Kerosene	Q	Q	Q	Q	Q	NF
LPG	3.1	0.3	0.6	Q	2.1	17.7
Does Not Heat Water	0.2	Q	Q	Q	Q	60.6
Dollars per Household						
Water-Heating Expenditures per Household,³ Where the Main Water-Heating Fuel Is:						
Electricity	227	209	230	231	245	2.6
Natural Gas	168	164	164	181	162	2.6
Fuel Oil	201	169	208	229	239	4.5
Kerosene	Q	Q	Q	Q	Q	NF
LPG	279	240	235	Q	298	8.9

See footnotes at end of table.

Table CE4-8e. Water-Heating Energy Expenditures in U.S. Households by Urban/Rural Location, 1997 (Continued)

	Total	Urban/Rural Location ¹				RSE Row Factors
		City	Town	Suburbs	Rural	
RSE Column Factor:	0.6	0.9	1.3	1.2	1.2	
Number of Household Members (NHM) per Household⁴						
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:						
Electricity	2.5	2.3	2.4	2.4	2.7	2.4
Natural Gas	2.7	2.7	2.7	2.8	2.7	2.5
Fuel Oil	2.4	2.2	2.4	2.8	2.7	4.3
Kerosene	Q	Q	Q	Q	Q	NF
LPG	2.6	2.8	1.9	Q	2.8	7.6
Water-Heating Intensity (Dollars÷NHM)⁴						
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:						
Electricity	92	90	94	95	92	2.6
Natural Gas	62	62	60	64	59	2.7
Fuel Oil	82	76	87	82	89	6.1
Kerosene	Q	Q	Q	Q	Q	NF
LPG	107	86	121	Q	107	8.9

¹ Based on the household respondent's description rather than the Federal Government definition.

² The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

³ Includes only the water-heating expenditures of the water-heating fuel. Not included are: 1) the expenditures of the main water-heating fuel for uses other than water heating; 2) the expenditures of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the expenditures of other fuels that are used as secondary water-heating fuels.

⁴ Averages are for those households using each of the main water-heating fuels.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE4-9e. Water-Heating Energy Expenditures in U.S. Households
by Northeast Census Region, 1997**

	Total U.S.	Northeast Census Region			RSE Row Factors
		Total	Census Division		
			Middle Atlantic	New England	
RSE Column Factor:	0.5	1.0	1.2	1.7	
Million Households					
Total U.S. Households	101.5	19.7	14.4	5.3	NF
No Water Heating	0.2	Q	Q	Q	65.8
Water Heating	101.3	19.7	14.4	5.3	NF
Not Using a Major Fuel ¹	0.5	Q	Q	Q	48.6
Using a Major Fuel ¹	100.8	19.6	14.3	5.3	0.6
For Main Water Heating	100.6	19.6	14.3	5.3	0.6
Number of Households with Water Heating, Major Fuels Used:					
Electricity	40.2	5.2	3.5	1.7	8.6
Natural Gas	52.8	9.2	7.6	1.6	9.1
Fuel Oil	5.2	4.9	3.1	1.8	9.6
Kerosene	Q	Q	Q	Q	NF
LPG	3.2	0.4	0.3	0.1	22.2
Billion Dollars					
Water-Heating Expenditures, Major Fuels Used:					
Electricity	8.99	1.55	1.02	0.53	8.3
Natural Gas	8.84	1.88	1.52	0.36	10.2
Fuel Oil	1.04	0.99	0.60	0.39	10.9
Kerosene	Q	Q	Q	Q	NF
LPG	0.89	0.14	0.11	0.03	21.2
Total	19.76	4.56	3.26	1.30	2.0
Dollars per Household					
Average Water-Heating Expenditures per Household					
Using a Major Fuel ¹	196	233	227	248	2.0
For Main Water Heating	196	233	227	248	2.0
Million Households					
Number of Households, Where the Main Water-Heating Fuel Is:					
Electricity	39.6	5.1	3.4	1.7	8.7
Natural Gas	52.6	9.1	7.5	1.6	9.1
Fuel Oil	5.1	4.8	3.0	1.8	9.5
Kerosene	Q	Q	Q	Q	NF
LPG	3.1	0.4	0.3	0.1	23.7
Does Not Heat Water	0.2	Q	Q	Q	65.8

See footnotes at end of table.

Table CE4-9e. Water-Heating Energy Expenditures in U.S. Households by Northeast Census Region, 1997 (Continued)

	Northeast Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Middle Atlantic	New England	
RSE Column Factor:	0.5	1.0	1.2	1.7	
Dollars per Household					
Water-Heating Expenditures per Household,²					
Where the Main Water-Heating Fuel Is:					
Electricity	227	302	299	308	3.8
Natural Gas	168	205	202	219	3.1
Fuel Oil	201	201	196	211	4.0
Kerosene	Q	Q	Q	Q	NF
LPG	279	352	391	257	9.0
Number of Household Members (NHM) per Household³					
Number of Household Members per Household,					
Where the Main Water-Heating Fuel Is:					
Electricity	2.5	2.5	2.5	2.5	3.2
Natural Gas	2.7	2.5	2.5	2.8	2.7
Fuel Oil	2.4	2.5	2.5	2.4	2.8
Kerosene	Q	Q	Q	Q	NF
LPG	2.6	2.5	2.5	2.7	9.1
Water-Heating Intensity (Dollars÷NHM)³					
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:					
Electricity	92	121	120	124	3.9
Natural Gas	62	81	81	79	4.0
Fuel Oil	82	82	77	89	5.3
Kerosene	Q	Q	Q	Q	NF
LPG	107	140	159	96	5.8

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the water-heating expenditures of the water-heating fuel. Not included are: 1) the expenditures of the main water-heating fuel for uses other than water heating; 2) the expenditures of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the expenditures of other fuels that are used as secondary water-heating fuels.

³ Averages are for those households using each of the main water-heating fuels.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE4-10e. Water-Heating Energy Expenditures in U.S. Households
by Midwest Census Region, 1997**

	Total U.S.	Midwest Census Region			RSE Row Factors
		Total	Census Division		
			East North Central	West North Central	
		0.5	1.0	1.2	
Million Households					
Total U.S. Households	101.5	24.1	16.9	7.2	NF
No Water Heating	0.2	Q	Q	Q	68.7
Water Heating	101.3	24.1	16.9	7.2	NF
Not Using a Major Fuel ¹	0.5	Q	Q	Q	50.7
Using a Major Fuel ¹	100.8	23.9	16.8	7.1	NF
For Main Water Heating	100.6	23.9	16.8	7.1	NF
Number of Households with Water Heating, Major Fuels Used:					
Electricity	40.2	6.5	4.1	2.3	8.2
Natural Gas	52.8	16.3	12.1	4.2	4.8
Fuel Oil	5.2	Q	Q	Q	17.2
Kerosene	Q	Q	Q	Q	NF
LPG	3.2	1.1	0.6	0.6	18.3
Billion Dollars					
Water-Heating Expenditures, Major Fuels Used:					
Electricity	8.99	1.44	0.91	0.53	11.4
Natural Gas	8.84	2.53	1.90	0.63	5.0
Fuel Oil	1.04	Q	Q	Q	18.6
Kerosene	Q	Q	Q	Q	NF
LPG	0.89	0.30	0.17	0.12	19.0
Total	19.76	4.28	2.99	1.29	3.2
Dollars per Household					
Average Water-Heating Expenditures per Household					
Using a Major Fuel ¹	196	179	178	182	3.2
For Main Water Heating	196	179	178	182	3.2
Million Households					
Number of Households, Where the Main Water-Heating Fuel Is:					
Electricity	39.6	6.4	4.1	2.3	8.1
Natural Gas	52.6	16.3	12.1	4.2	4.8
Fuel Oil	5.1	Q	Q	Q	17.3
Kerosene	Q	Q	Q	Q	NF
LPG	3.1	1.1	0.6	0.6	18.4
Does Not Heat Water	0.2	Q	Q	Q	68.7

See footnotes at end of table.

Table CE4-10e. Water-Heating Energy Expenditures in U.S. Households by Midwest Census Region, 1997 (Continued)

	Midwest Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			East North Central	West North Central	
	0.5	1.0	1.2	1.6	
Dollars per Household					
Water-Heating Expenditures per Household,² Where the Main Water-Heating Fuel Is:					
Electricity	227	225	224	228	4.9
Natural Gas	168	155	157	151	2.4
Fuel Oil	201	Q	Q	Q	6.9
Kerosene	Q	Q	Q	Q	NF
LPG	279	263	301	223	8.3
Number of Household Members (NHM) per Household³					
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:					
Electricity	2.5	2.4	2.4	2.5	3.1
Natural Gas	2.7	2.7	2.7	2.6	2.5
Fuel Oil	2.4	Q	Q	Q	4.5
Kerosene	Q	Q	Q	Q	NF
LPG	2.6	2.5	2.7	2.2	6.2
Water-Heating Intensity (Dollars÷NHM)³					
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:					
Electricity	92	92	92	92	3.7
Natural Gas	62	58	58	57	2.3
Fuel Oil	82	Q	Q	Q	8.8
Kerosene	Q	Q	Q	Q	NF
LPG	107	106	111	100	6.0

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the water-heating expenditures of the water-heating fuel. Not included are: 1) the expenditures of the main water-heating fuel for uses other than water heating; 2) the expenditures of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the expenditures of other fuels that are used as secondary water-heating fuels.

³ Averages are for those households using each of the main water-heating fuels.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE4-11e. Water-Heating Energy Expenditures in U.S. Households
by South Census Region, 1997**

	Total U.S.	South Census Region			RSE Row Factors	
		Total	Census Division			
			South Atlantic	East South Central		West South Central
RSE Column Factor:	0.5	0.8	1.2	1.6	1.4	
Million Households						
Total U.S. Households	101.5	35.9	18.7	6.3	10.8	NF
No Water Heating	0.2	Q	Q	Q	Q	74.3
Water Heating	101.3	35.8	18.6	6.3	10.8	NF
Not Using a Major Fuel ¹	0.5	Q	Q	Q	Q	54.9
Using a Major Fuel ¹	100.8	35.7	18.5	6.3	10.8	NF
For Main Water Heating	100.6	35.6	18.4	6.3	10.8	NF
Number of Households with Water Heating, Major Fuels Used:						
Electricity	40.2	21.0	12.9	4.2	4.0	6.0
Natural Gas	52.8	13.4	5.0	1.9	6.6	8.1
Fuel Oil	5.2	Q	Q	Q	Q	18.6
Kerosene	Q	Q	Q	Q	Q	NF
LPG	3.2	1.1	0.5	0.3	0.3	19.4
Billion Dollars						
Water-Heating Expenditures, Major Fuels Used:						
Electricity	8.99	4.59	2.85	0.86	0.87	7.3
Natural Gas	8.84	2.34	0.97	0.31	1.06	8.9
Fuel Oil	1.04	Q	Q	Q	Q	20.1
Kerosene	Q	Q	Q	Q	Q	NF
LPG	0.89	0.29	0.13	0.07	0.08	20.8
Total	19.76	7.25	3.98	1.25	2.02	2.7
Dollars per Household						
Average Water-Heating Expenditures per Household						
Using a Major Fuel ¹	196	203	215	197	187	2.7
For Main Water Heating	196	204	216	197	187	2.7
Million Households						
Number of Households, Where the Main Water-Heating Fuel Is:						
Electricity	39.6	20.9	12.8	4.2	3.9	6.1
Natural Gas	52.6	13.4	4.9	1.9	6.6	8.1
Fuel Oil	5.1	Q	Q	Q	Q	18.7
Kerosene	Q	Q	Q	Q	Q	NF
LPG	3.1	1.1	0.5	0.3	0.3	20.3
Does Not Heat Water	0.2	Q	Q	Q	Q	74.3

See footnotes at end of table.

Table CE4-11e. Water-Heating Energy Expenditures in U.S. Households by South Census Region, 1997 (Continued)

	South Census Region					RSE Row Factors
	Total U.S.	Census Division			West South Central	
		Total	South Atlantic	East South Central		
RSE Column Factor:	0.5	0.8	1.2	1.6	1.4	
Dollars per Household						
Water-Heating Expenditures per Household,² Where the Main Water-Heating Fuel Is:						
Electricity	227	219	222	208	222	3.2
Natural Gas	168	174	194	164	162	3.8
Fuel Oil	201	Q	Q	Q	Q	7.5
Kerosene	Q	Q	Q	Q	Q	NF
LPG	279	257	260	256	253	8.5
Number of Household Members (NHM) per Household³						
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:						
Electricity	2.5	2.5	2.5	2.6	2.4	2.0
Natural Gas	2.7	2.7	2.7	2.3	2.8	3.5
Fuel Oil	2.4	Q	Q	Q	Q	4.9
Kerosene	Q	Q	Q	Q	Q	NF
LPG	2.6	2.6	2.4	2.3	3.1	9.9
Water-Heating Intensity (Dollars÷NHM)³						
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:						
Electricity	92	89	90	81	93	3.1
Natural Gas	62	64	73	70	57	3.6
Fuel Oil	82	Q	Q	Q	Q	9.5
Kerosene	Q	Q	Q	Q	Q	NF
LPG	107	100	107	110	83	11.4

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the water-heating expenditures of the water-heating fuel. Not included are: 1) the expenditures of the main water-heating fuel for uses other than water heating; 2) the expenditures of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the expenditures of other fuels that are used as secondary water-heating fuels.

³ Averages are for those households using each of the main water-heating fuels.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE4-12e. Water-Heating Energy Expenditures in U.S. Households
by West Census Region, 1997**

	West Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Mountain	Pacific	
RSE Column Factor:	0.5	1.0	1.9	1.1	
Million Households					
Total U.S. Households	101.5	21.8	6.2	15.6	NF
No Water Heating	0.2	Q	Q	Q	66.6
Water Heating	101.3	21.8	6.2	15.6	NF
Not Using a Major Fuel ¹	0.5	Q	Q	Q	49.2
Using a Major Fuel ¹	100.8	21.6	6.1	15.5	NF
For Main Water Heating	100.6	21.6	6.1	15.5	NF
Number of Households with Water Heating, Major Fuels Used:					
Electricity	40.2	7.5	2.2	5.3	6.1
Natural Gas	52.8	13.9	3.8	10.1	3.4
Fuel Oil	5.2	Q	Q	Q	16.7
Kerosene	Q	Q	Q	Q	NF
LPG	3.2	0.5	Q	0.4	20.9
Billion Dollars					
Water-Heating Expenditures, Major Fuels Used:					
Electricity	8.99	1.41	0.40	1.02	7.6
Natural Gas	8.84	2.09	0.51	1.58	6.2
Fuel Oil	1.04	Q	Q	Q	18.0
Kerosene	Q	Q	Q	Q	NF
LPG	0.89	0.16	0.05	0.11	22.7
Total	19.76	3.67	0.96	2.71	2.5
Dollars per Household					
Average Water-Heating Expenditures per Household					
Using a Major Fuel ¹	196	169	157	174	2.4
For Main Water Heating	196	170	157	175	2.5
Million Households					
Number of Households, Where the Main Water-Heating Fuel Is:					
Electricity	39.6	7.2	2.1	5.1	6.3
Natural Gas	52.6	13.9	3.8	10.0	3.4
Fuel Oil	5.1	Q	Q	Q	16.7
Kerosene	Q	Q	Q	Q	NF
LPG	3.1	0.5	Q	0.4	21.0
Does Not Heat Water	0.2	Q	Q	Q	66.6

See footnotes at end of table.

Table CE4-12e. Water-Heating Energy Expenditures in U.S. Households by West Census Region, 1997 (Continued)

	West Census Region				RSE Row Factors
	Total U.S.	Census Division			
		Total	Mountain	Pacific	
RSE Column Factor:	0.5	1.0	1.9	1.1	
Dollars per Household					
Water-Heating Expenditures per Household,² Where the Main Water-Heating Fuel Is:					
Electricity	227	195	187	199	3.1
Natural Gas	168	151	134	157	3.9
Fuel Oil	201	Q	Q	Q	6.7
Kerosene	Q	Q	Q	Q	NF
LPG	279	304	298	307	8.4
Number of Household Members (NHM) per Household³					
Number of Household Members per Household, Where the Main Water-Heating Fuel Is:					
Electricity	2.5	2.4	2.4	2.4	3.4
Natural Gas	2.7	2.8	2.8	2.9	2.6
Fuel Oil	2.4	Q	Q	Q	4.4
Kerosene	Q	Q	Q	Q	NF
LPG	2.6	3.0	3.2	2.8	9.0
Water-Heating Intensity (Dollars÷NHM)³					
Water-Heating Intensity, Where the Main Water-Heating Fuel Is:					
Electricity	92	82	78	83	4.0
Natural Gas	62	53	48	55	3.4
Fuel Oil	82	Q	Q	Q	8.5
Kerosene	Q	Q	Q	Q	NF
LPG	107	103	93	108	6.8

¹ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

² Includes only the water-heating expenditures of the water-heating fuel. Not included are: 1) the expenditures of the main water-heating fuel for uses other than water heating; 2) the expenditures of the main water-heating fuel where it is the secondary, and not the main, water-heating fuel, and; 3) the expenditures of other fuels that are used as secondary water-heating fuels.

³ Averages are for those households using each of the main water-heating fuels.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

1997 Consumption and Expenditures Tables

Appliances Consumption Tables

(17 pages, 60 kb)

Contents

Pages

CE5-1c. Appliances Energy Consumption in U.S. Households by Climate Zone, 1997	2
CE5-2c. Appliances Energy Consumption in U.S. Households by Year of Construction, 1997	2
CE5-3c. Appliances Energy Consumption in U.S. Households by Household Income, 1997	2
CE5-4c. Appliances Energy Consumption in U.S. Households by Type of Housing Unit, 1997	2
CE5-5u. Appliances Energy Consumption and Expenditures in U.S. Households by Household Demographics, 1997	1
CE5-6u. Appliances Energy Consumption and Expenditures in U.S. Households by Usage Indicators, 1997	2
CE5-7c. Appliances Energy Consumption in U.S. Households by Four Most Populated States, 1997	1
CE5-8c. Appliances Energy Consumption in U.S. Households by Urban/Rural Location, 1997	1
CE5-9c. Appliances Energy Consumption in U.S. Households by Northeast Census Region, 1997	1
CE5-10c. Appliances Energy Consumption in U.S. Households by Midwest Census Region, 1997	1
CE5-11c. Appliances Energy Consumption in U.S. Households by South Census Region, 1997	1
CE5-12c. Appliances Energy Consumption in U.S. Households by West Census Region, 1997	1

These data are from the 1997 Residential Energy Consumption Survey (RECS) which provides information on the use of energy in residential housing units in the United States. The RECS is a national statistical survey that collects data for occupied primary housing units. RECS was first conducted in 1978; the sixth and most recent survey was conducted in 1997 RECS. The data were collected from a sample of 5,900 housing units statistically selected to represent the 101.5 million units in the United States. The 1997 data are available for the four Census regions, the nine Census divisions, and for the four most populous States--California, Florida, New York, and Texas.

Data provided here are in the public domain and may be reproduced without permission. Appropriate credit would be appreciated. A suggested citation is "U.S. Department of Energy, Energy Information Administration, *"A Look at Residential Energy Consumption in 1997."*

Electronic Products and Services

Users can view and download selected pages or entire reports, search for information, download data and analysis applications, and find out about new information products and services.

Contact: Robert Latta, Survey Manager (rlatta@eia.doe.gov)

World Wide Web: <http://www.eia.doe.gov/emeu/consumption>

Table CE5-1c. Appliances¹ Energy Consumption in U.S. Households by Climate Zone, 1997

	Climate Zone ²						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factor:	0.3	1.6	1.0	1.2	1.3	1.1	
Million Households							
Total U.S. Households	101.5	9.3	28.0	22.5	19.5	22.2	7.7
Number of Households With Appliances, Fuels Used (more than one may apply):							
Electricity for:							
Refrigerators	101.3	9.2	28.0	22.5	19.5	22.1	7.7
Other Appliances and Lighting	101.4	9.2	28.0	22.5	19.5	22.2	7.7
Natural Gas	40.4	2.5	13.2	8.9	8.4	7.3	8.6
LPG	4.8	0.9	1.1	1.0	0.8	0.9	24.1
Quadrillion Btu							
Appliances Btu Consumption, Fuels Used:							
Electricity for:							
Refrigerators	0.46	0.04	0.11	0.10	0.08	0.13	7.2
Other Appliances and Lighting	1.87	0.18	0.51	0.41	0.32	0.46	7.6
Natural Gas	0.37	0.02	0.13	0.07	0.08	0.07	10.7
LPG	0.02	(*)	0.01	(*)	0.01	(*)	25.7
Total	2.73	0.24	0.76	0.58	0.49	0.67	7.3
Physical Units							
Physical Units of Appliances Consumption, Fuels Used:							
Electricity for:							
Refrigerators (billion kWh)	134	10	33	28	25	37	7.2
Other Appliances and Lighting (billion kWh)	549	52	149	119	94	136	7.6
Natural Gas (billion cf)	365	22	125	69	76	72	10.7
LPG (million gallons)	267	44	67	48	56	53	25.7
Million Btu per Household³							
Appliances Btu Consumption per Household, Fuels Used:							
Electricity for:							
Refrigerators	4.5	3.9	4.1	4.3	4.3	5.8	2.3
Other Appliances and Lighting	18.5	19.1	18.1	18.1	16.4	20.9	2.6
Natural Gas	9.3	8.7	9.7	8.0	9.3	10.2	5.5
LPG	5.1	4.3	5.3	4.6	6.1	5.1	12.0
Total	26.9	25.8	27.0	25.7	24.9	30.2	2.4

See footnotes at end of table.

Table CE5-1c. Appliances¹ Energy Consumption in U.S. Households by Climate Zone, 1997 (Continued)

	Climate Zone ²						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factor:	0.3	1.6	1.0	1.2	1.3	1.1	

Physical Units per Household³

Physical Units of Appliances Consumption per Household, Fuels Used:

Electricity for:							
Refrigerators (kWh)	1,323	1,136	1,194	1,247	1,268	1,691	2.3
Other Appliances and Lighting (kWh)	5,412	5,607	5,311	5,293	4,799	6,115	2.6
Natural Gas (thousand cf)	9	8	9	8	9	10	5.5
LPG (gallons)	55	47	58	50	66	56	12.0

¹ Includes energy consumption for refrigeration and lighting.

² One of five climatically distinct areas, determined according to the 30-year average (1961-1990) of the annual heating and cooling degree-days. For this report, the heating or cooling degree-days are a measure of how cold or how hot a location is over a period of one year, relative to a base temperature of 65 degrees Fahrenheit. A household is assigned to a climate zone according to the 30-year average annual degree-days for an appropriate nearby weather station.

³ Averages are for those households using each of the fuels for appliances.

(*) = Value rounds to zero in the units displayed.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE5-2c. Appliances¹ Energy Consumption in U.S. Households by Year of Construction, 1997

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ²	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.4	1.9	1.3	1.0	1.0	1.2	0.9	
Million Households								
Total U.S. Households	101.5	9.7	17.3	19.6	14.4	12.5	27.9	4.1
Number of Households With Appliances, Fuels Used (more than one may apply):								
Electricity for:								
Refrigerators	101.3	9.7	17.3	19.5	14.4	12.5	27.8	4.1
Other Appliances and Lighting	101.4	9.7	17.3	19.6	14.4	12.5	27.9	4.1
Natural Gas	40.4	2.9	4.4	5.2	5.3	6.5	16.1	7.5
LPG	4.8	0.5	0.8	0.9	0.8	0.2	1.6	17.1
Quadrillion Btu								
Appliances Btu Consumption, Fuels Used:								
Electricity for:								
Refrigerators	0.46	0.04	0.08	0.09	0.07	0.06	0.11	4.4
Other Appliances and Lighting	1.87	0.21	0.35	0.39	0.25	0.22	0.45	4.3
Natural Gas	0.37	0.04	0.05	0.05	0.05	0.06	0.14	9.8
LPG	0.02	(*)	(*)	(*)	(*)	(*)	0.01	22.2
Total	2.73	0.30	0.48	0.53	0.37	0.34	0.71	4.3
Physical Units								
Physical Units of Appliances Consumption, Fuels Used:								
Electricity for:								
Refrigerators (billion kWh)	134	13	25	27	19	17	33	4.4
Other Appliances and Lighting (billion kWh)	549	62	103	113	74	65	132	4.3
Natural Gas (billion cf)	365	36	45	49	44	58	132	9.8
LPG (million gallons)	267	46	43	50	39	6	83	22.2
Million Btu per Household³								
Appliances Btu Consumption per Household, Fuels Used:								
Electricity for:								
Refrigerators	4.5	4.5	4.9	4.7	4.6	4.7	4.0	2.4
Other Appliances and Lighting	18.5	21.8	20.2	19.7	17.6	17.6	16.2	2.3
Natural Gas	9.3	12.8	10.6	9.7	8.5	9.2	8.4	5.7
LPG	5.1	8.1	5.0	4.8	4.4	2.5	4.9	13.6
Total	26.9	30.6	28.0	27.2	25.5	27.1	25.3	2.3

See footnotes at end of table.

Table CE5-2c. Appliances¹ Energy Consumption in U.S. Households by Year of Construction, 1997 (Continued)

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ²	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.4	1.9	1.3	1.0	1.0	1.2	0.9	

Physical Units per Household³

Physical Units of Appliances Consumption per Household, Fuels Used:

Electricity for:								
Refrigerators (kWh)	1,323	1,327	1,424	1,378	1,348	1,370	1,187	2.4
Other Appliances and Lighting (kWh)	5,412	6,396	5,926	5,777	5,149	5,169	4,740	2.3
Natural Gas (thousand cf)	9	12	10	9	8	9	8	5.7
LPG (gallons)	55	89	55	53	48	27	54	13.6

¹ Includes energy consumption for refrigeration and lighting.

² New construction for 1997 includes only those housing units built and occupied between January and the April-August period when the household interviews were conducted.

³ Averages are for those households using each of the fuels for appliances.

(*) = Value rounds to zero in the units displayed.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE5-3c. Appliances¹ Energy Consumption in U.S. Households by Household Income, 1997

	Total	1997 Household Income				Below Poverty Line	Eli-gible for Fed-eral Assist-ance ²	RSE Row Factors
		Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.5	1.6	1.0	0.9	1.1	1.3	0.9	
Million Households								
Total U.S. Households	101.5	13.3	29.1	31.1	27.9	14.6	34.1	2.7
Number of Households With Appliances, Fuels Used (more than one may apply):								
Electricity for:								
Refrigerators	101.3	13.2	29.1	31.1	27.9	14.6	34.0	2.7
Other Appliances and Lighting	101.4	13.3	29.1	31.1	27.9	14.6	34.0	2.7
Natural Gas	40.4	5.8	11.3	11.7	11.7	6.8	14.7	4.8
LPG	4.8	0.7	1.6	1.4	1.1	0.8	1.9	14.7
Quadrillion Btu								
Appliances Btu Consumption, Fuels Used:								
Electricity for:								
Refrigerators	0.46	0.05	0.12	0.14	0.15	0.06	0.13	3.2
Other Appliances and Lighting	1.87	0.16	0.44	0.59	0.69	0.21	0.50	3.2
Natural Gas	0.37	0.05	0.08	0.11	0.13	0.06	0.12	6.6
LPG	0.02	(*)	0.01	0.01	0.01	(*)	0.01	17.1
Total	2.73	0.26	0.65	0.84	0.98	0.33	0.77	3.2
Physical Units								
Physical Units of Appliances Consumption, Fuels Used:								
Electricity for:								
Refrigerators (billion kWh)	134	15	35	40	45	16	39	3.2
Other Appliances and Lighting (billion kWh)	549	46	130	172	201	61	146	3.2
Natural Gas (billion cf)	365	44	81	111	128	59	121	6.6
LPG (million gallons)	267	35	81	73	77	34	103	17.2
Million Btu per Household³								
Appliances Btu Consumption per Household, Fuels Used:								
Electricity for:								
Refrigerators	4.5	3.8	4.1	4.4	5.5	3.8	3.9	1.9
Other Appliances and Lighting	18.5	11.8	15.2	18.8	24.6	14.1	14.6	2.0
Natural Gas	9.3	7.8	7.4	9.8	11.3	8.9	8.5	3.8
LPG	5.1	4.4	4.6	4.9	6.3	3.9	5.0	11.1
Total	26.9	19.2	22.4	27.0	35.1	22.3	22.5	1.9

See footnotes at end of table.

Table CE5-3c. Appliances¹ Energy Consumption in U.S. Households by Household Income, 1997 (Continued)

	Total	1997 Household Income				Below Poverty Line	Eli-gible for Federal Assist-ance ²	RSE Row Factors
		Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.5	1.6	1.0	0.9	1.1	1.3	0.9	

Physical Units per Household³

Physical Units of Appliances Consumption per Household, Fuels Used:

	Total	Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More	Below Poverty Line	Eli-gible for Federal Assist-ance ²	RSE Row Factors
Electricity for:								
Refrigerators (kWh)	1,323	1,114	1,198	1,279	1,603	1,123	1,147	1.9
Other Appliances and Lighting (kWh)	5,412	3,461	4,462	5,511	7,219	4,139	4,292	2.0
Natural Gas (thousand cf)	9	8	7	10	11	9	8	3.8
LPG (gallons)	55	48	51	54	69	43	55	11.1

¹ Includes energy consumption for refrigeration and lighting.

² Below 150 percent of poverty line or 60 percent of median State income.

³ Averages are for those households using each of the fuels for appliances.

(*) = Value rounds to zero in the units displayed.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE5-4c. Appliances¹ Energy Consumption in U.S. Households
by Type of Housing Unit, 1997**

	Total	Type of Housing Unit				RSE Row Factors
		Single-Family	Multifamily		Mobile Home	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.5	0.5	1.8	1.4	1.6	
Million Households						
Total U.S. Households	101.5	73.7	5.6	15.8	6.3	4.0
Number of Households With Appliances, Fuels Used (more than one may apply):						
Electricity for:						
Refrigerators	101.3	73.7	5.6	15.7	6.3	4.0
Other Appliances and Lighting	101.4	73.7	5.6	15.8	6.3	4.0
Natural Gas	40.4	30.4	2.7	5.4	1.8	6.9
LPG	4.8	3.4	Q	Q	1.3	16.7
Quadrillion Btu						
Appliances Btu Consumption, Fuels Used:						
Electricity for:						
Refrigerators	0.46	0.37	0.02	0.05	0.02	3.9
Other Appliances and Lighting	1.87	1.56	0.06	0.14	0.11	3.9
Natural Gas	0.37	0.31	0.02	0.03	0.01	8.5
LPG	0.02	0.02	Q	Q	0.01	19.9
Total	2.73	2.25	0.10	0.23	0.15	3.7
Physical Units						
Physical Units of Appliances Consumption, Fuels Used:						
Electricity for:						
Refrigerators (billion kWh)	134	107	6	14	7	3.9
Other Appliances and Lighting (billion kWh)	549	457	18	42	32	3.9
Natural Gas (billion cf)	365	302	19	32	12	8.5
LPG (million gallons)	267	189	Q	Q	75	19.9
Million Btu per Household²						
Appliances Btu Consumption per Household, Fuels Used:						
Electricity for:						
Refrigerators	4.5	5.0	3.4	3.1	3.9	2.0
Other Appliances and Lighting	18.5	21.1	10.7	9.1	17.4	2.1
Natural Gas	9.3	10.2	7.1	6.0	6.8	4.3
LPG	5.1	5.1	Q	Q	5.2	10.6
Total	26.9	30.5	17.5	14.3	24.3	1.8

See footnotes at end of table.

Table CE5-4c. Appliances¹ Energy Consumption in U.S. Households by Type of Housing Unit, 1997 (Continued)

	Total	Type of Housing Unit			Mobile Home	RSE Row Factors
		Single-Family	Multifamily			
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.5	0.5	1.8	1.4	1.6	

Physical Units per Household²

Physical Units of Appliances Consumption per Household, Fuels Used:

	Total	Single-Family	Two to Four Units	Five or More Units	Mobile Home	RSE Row Factors
Electricity for:						
Refrigerators (kWh)	1,323	1,454	982	906	1,136	2.0
Other Appliances and Lighting (kWh)	5,412	6,198	3,129	2,677	5,102	2.1
Natural Gas (thousand cf)	9	10	7	6	7	4.3
LPG (gallons)	55	56	Q	Q	57	10.6

¹ Includes energy consumption for refrigeration and lighting.

² Averages are for those households using each of the fuels for appliances.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE5-5u. Appliances¹ Energy Consumption and Expenditures in U.S. Households by Household Demographics, 1997

Household Demographics	Appliances Energy					RSE Row Factors
	Households (millions)	Total		Per Household		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	
RSE Column Factor:	1.1	1.3	1.3	0.7	0.7	
Total	101.5	2.73	63.80	26.9	629	1.2
Household Size						
1 Person	25.5	0.42	10.38	16.6	407	2.1
2 Persons	33.0	0.87	20.49	26.3	621	2.2
3 Persons	17.4	0.53	12.35	30.3	709	2.5
4 Persons	15.2	0.52	11.74	34.0	770	2.7
5 Persons	6.4	0.24	5.39	37.0	839	4.7
6 or More Persons	3.9	0.15	3.46	39.7	894	6.4
1997 Household Income Category						
Less than \$5,000	3.8	0.08	1.77	20.2	472	6.1
\$5,000 to \$9,999	9.5	0.18	4.17	18.8	437	5.7
\$10,000 to \$14,999	10.3	0.21	4.94	20.8	479	4.2
\$15,000 to \$19,999	10.4	0.24	5.61	22.7	539	4.3
\$20,000 to \$24,999	8.4	0.20	4.70	24.1	558	4.1
\$25,000 to \$34,999	15.6	0.40	9.17	25.5	587	3.0
\$35,000 to \$49,999	15.5	0.44	10.27	28.6	662	2.6
\$50,000 to \$74,999	16.4	0.52	12.56	31.8	765	3.2
\$75,000 or More	11.5	0.46	10.61	39.7	924	4.1
Below Poverty Line						
100 Percent	14.6	0.33	7.51	22.3	512	3.6
125 Percent	19.7	0.44	9.98	22.2	508	3.3
150 Percent	26.7	0.60	13.77	22.5	516	2.7
Eligible for Federal Assistance²	34.1	0.77	17.78	22.5	522	2.5
Age of Householder						
Under 25 Years	5.7	0.11	2.56	19.1	451	5.0
25 to 34 Years	18.5	0.44	10.30	23.9	556	2.6
35 to 44 Years	23.2	0.71	16.21	30.6	699	2.5
45 to 59 Years	25.6	0.80	18.68	31.4	730	2.2
60 Years and Over	28.5	0.66	16.05	23.3	563	2.7
Race of Householder						
White	78.5	2.18	50.68	27.8	646	1.4
Black	12.7	0.33	7.69	26.1	606	4.0
Other ³	10.3	0.22	5.43	21.1	528	5.3
Householder of Hispanic Descent						
Yes	9.4	0.21	5.28	22.7	560	4.9
No	92.0	2.51	58.52	27.3	636	1.4

¹ These consumption and expenditures amounts cover the total energy used for all appliances (including refrigerators and lighting) and any of the three fuels (electricity, natural gas, and LPG) used in the housing unit. They do not only cover the energy used for the appliance listed.

² Below 150 percent of poverty line or 60 percent of median State income.

³ Includes 5.5 million householders who described themselves as Hispanic rather than White, Black, or other.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1997 Residential Energy Consumption Survey.

Table CE5-6u. Appliances¹ Energy Consumption and Expenditures in U.S. Households by Usage Indicators, 1997

Usage Indicators	Appliances Energy					RSE Row Factors
	Households (millions)	Total		Per Household		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	
	RSE Column Factor:	1.2	1.3	1.4	0.7	
Total	101.5	2.73	63.80	26.9	629	1.2
Estimated Heated Floorspace Category (square feet)²						
Fewer than 600	7.9	0.11	2.84	14.6	361	4.7
600 to 999	21.5	0.42	9.96	19.5	463	3.1
1,000 to 1,599	30.4	0.80	18.48	26.3	609	2.3
1,600 to 1,999	15.3	0.48	11.26	31.5	737	2.8
2,000 to 2,399	7.9	0.27	6.45	34.6	818	4.0
2,400 to 2,999	5.3	0.22	4.77	40.5	895	5.2
3,000 or More	4.1	0.22	4.74	52.2	1,148	7.2
No Estimate Provided	9.1	0.21	5.30	23.3	582	5.0
Household Size						
1 Person	25.5	0.42	10.38	16.6	407	2.2
2 Persons	33.0	0.87	20.49	26.3	621	2.2
3 Persons	17.4	0.53	12.35	30.3	709	2.5
4 Persons	15.2	0.52	11.74	34.0	770	2.7
5 Persons	6.4	0.24	5.39	37.0	839	4.7
6 or More Persons	3.9	0.15	3.46	39.7	894	6.4
Weekday Home Activities						
Home Used for Business						
Yes	7.4	0.24	5.56	32.9	756	5.4
No	94.1	2.49	58.24	26.4	619	1.3
Energy-Intensive Activity						
Yes	2.4	0.09	2.07	38.4	863	8.5
No	99.1	2.64	61.73	26.6	623	1.3
Someone Home All Day						
Yes	51.3	1.47	34.24	28.7	667	1.9
No	50.1	1.26	29.56	25.1	589	1.7
Number of Refrigerators¹						
1	85.9	2.13	49.95	24.8	581	1.4
2 or More	15.4	0.60	13.82	39.0	898	3.0
Electric Appliances Used (more than one may apply)¹						
Refrigerators	101.3	2.73	63.77	26.9	629	1.2
Separate Freezer	33.7	1.15	25.66	34.2	762	2.0
Dishwasher	50.9	1.60	37.20	31.4	731	1.9
Clothes Washer	78.5	2.39	55.18	30.5	703	1.2
Clothes Dryer	72.2	2.27	51.85	31.4	718	1.4
Waterbed Heater	8.4	0.30	6.64	35.5	790	4.8
Swimming-Pool Pump	5.5	0.27	6.18	48.7	1,128	5.4
Hot-Tub or Spa Heater	2.7	0.12	2.78	44.9	1,037	6.7
Well Pump	14.3	0.48	11.30	33.3	788	5.1
Appliance Combination Usage						
Dishwasher, Clothes Washer, and Clothes Dryer						
All	44.4	1.50	34.48	33.7	776	2.0
Some	39.8	0.98	22.94	24.6	576	2.1
None	17.2	0.25	6.38	14.6	371	3.7

See footnotes at end of table.

Table CE5-6u. Appliances¹ Energy Consumption and Expenditures in U.S. Households by Usage Indicators, 1997 (Continued)

Usage Indicators	Appliances Energy					RSE Row Factors
	Households (millions)	Total		Per Household		
		Consumption (quadrillion Btu)	Expenditures (billion dollars)	Consumption (million Btu)	Expenditures (dollars)	
RSE Column Factor:	1.2	1.3	1.4	0.7	0.7	
Local Electricity Utility Rate (cents per kWh)						
Less than 6	7.8	0.23	3.51	28.8	449	9.0
6 to Less than 8	37.1	1.07	21.60	29.0	583	3.9
8 to Less than 10	24.7	0.69	16.09	27.9	652	6.2
10 to Less than 12	13.7	0.33	9.05	24.2	661	6.2
12 to Less than 14	14.0	0.33	10.20	23.4	731	5.3
14 or More	4.2	0.08	3.35	19.7	795	7.3
Fuels for Appliance Use Paid by Household						
All Major Fuels³						
Yes	93.4	2.59	60.51	27.7	648	1.3
No	4.7	0.08	1.72	15.9	364	7.8
Some	3.3	0.06	1.57	19.3	475	7.8
Electricity						
Yes	96.3	2.65	61.90	27.5	643	1.3
No	5.1	0.08	1.90	16.0	370	7.5
Natural Gas						
Yes	35.5	1.11	24.64	31.2	695	2.7
No	5.0	0.09	2.19	18.8	441	6.0
LPG						
Yes	4.8	0.13	3.35	28.1	700	6.9
No	Q	Q	Q	Q	Q	NF

¹ These consumption and expenditures amounts cover the total energy used for all appliances (including refrigerators and lighting) and any of the three fuels (electricity, natural gas, and LPG) used in the housing unit. They do not only cover the energy used for the appliance listed.

² Estimates provided by the household interview respondents, who were asked which category best described the total heated floorspace in the home.

³ The major fuels are electricity, natural gas, fuel oil, kerosene, and liquefied petroleum gas (LPG).

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• Appliances include refrigerators. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A, B, C of the 1997 Residential Energy Consumption Survey.

Table CE5-7c. Appliances¹ Energy Consumption in U.S. Households by Four Most Populated States, 1997

	Total U.S.	Four Most Populated States				RSE Row Factors
		New York	California	Texas	Florida	
RSE Column Factor:	0.3	1.0	1.1	1.4	1.9	
Million Households						
Total U.S. Households	101.5	6.8	11.5	7.0	5.9	NF
Number of Households With Appliances, Fuels Used (more than one may apply):						
Electricity for:						
Refrigerators	101.3	6.8	11.4	7.0	5.9	NF
Other Appliances and Lighting	101.4	6.8	11.5	7.0	5.9	NF
Natural Gas	40.4	4.2	7.3	3.1	0.6	7.1
LPG	4.8	0.5	0.3	0.3	0.3	23.2
Quadrillion Btu						
Appliances Btu Consumption, Fuels Used:						
Electricity for:						
Refrigerators	0.46	0.02	0.04	0.04	0.03	3.5
Other Appliances and Lighting	1.87	0.09	0.15	0.16	0.13	4.0
Natural Gas	0.37	0.03	0.07	0.04	Q	9.4
LPG	0.02	(*)	(*)	(*)	(*)	30.6
Total	2.73	0.15	0.26	0.24	0.17	3.9
Physical Units						
Physical Units of Appliances Consumption, Fuels Used:						
Electricity for:						
Refrigerators (billion kWh)	134	7	13	13	10	3.5
Other Appliances and Lighting (billion kWh)	549	27	43	47	37	4.0
Natural Gas (billion cf)	365	31	67	35	Q	9.4
LPG (million gallons)	267	18	18	19	12	30.7
Million Btu per Household²						
Appliances Btu Consumption per Household, Fuels Used:						
Electricity for:						
Refrigerators	4.5	3.3	3.9	6.4	5.8	3.5
Other Appliances and Lighting	18.5	13.3	12.8	22.9	21.2	4.1
Natural Gas	9.3	7.6	9.5	11.7	13.6	7.1
LPG	5.1	3.4	4.9	6.7	4.0	15.2
Total	26.9	21.6	22.8	34.8	28.7	3.9
Physical Units per Household²						
Physical Units of Appliances Consumption per Household, Fuels Used:						
Electricity for:						
Refrigerators (kWh)	1,323	975	1,150	1,868	1,690	3.5
Other Appliances and Lighting (kWh)	5,412	3,903	3,739	6,722	6,222	4.1
Natural Gas (thousand cf)	9	7	9	11	13	7.1
LPG (gallons)	55	38	53	74	44	15.2

¹ Includes energy consumption for refrigeration and lighting.

² Averages are for those households using each of the fuels for appliances.

(*) = Value rounds to zero in the units displayed.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE5-8c. Appliances¹ Energy Consumption in U.S. Households by Urban/Rural Location, 1997

	Urban/Rural Location ²					RSE Row Factors
	Total	City	Town	Suburbs	Rural	
	0.5	0.9	1.3	1.5	1.2	
Million Households						
Total U.S. Households	101.5	48.2	18.2	18.6	16.5	3.9
Number of Households With Appliances, Fuels Used (more than one may apply):						
Electricity for:						
Refrigerators	101.3	48.1	18.2	18.6	16.4	3.9
Other Appliances and Lighting	101.4	48.2	18.2	18.6	16.4	3.9
Natural Gas	40.4	23.9	6.1	8.0	2.4	6.4
LPG	4.8	0.5	0.8	0.3	3.2	16.8
Quadrillion Btu						
Appliances Btu Consumption, Fuels Used:						
Electricity for:						
Refrigerators	0.46	0.21	0.08	0.09	0.08	3.9
Other Appliances and Lighting	1.87	0.76	0.33	0.40	0.39	3.8
Natural Gas	0.37	0.21	0.05	0.09	0.02	8.5
LPG	0.02	(*)	(*)	(*)	0.02	21.6
Total	2.73	1.18	0.46	0.58	0.51	3.7
Physical Units						
Physical Units of Appliances Consumption, Fuels Used:						
Electricity for:						
Refrigerators (billion kWh)	134	60	23	28	23	3.9
Other Appliances and Lighting (billion kWh)	549	222	96	117	114	3.8
Natural Gas (billion cf)	365	204	53	86	22	8.5
LPG (million gallons)	267	24	40	15	188	21.6
Million Btu per Household³						
Appliances Btu Consumption per Household, Fuels Used:						
Electricity for:						
Refrigerators	4.5	4.3	4.3	5.1	4.9	1.9
Other Appliances and Lighting	18.5	15.7	18.0	21.5	23.6	1.8
Natural Gas	9.3	8.8	8.8	11.1	9.3	4.8
LPG	5.1	4.1	4.5	5.2	5.4	13.8
Total	26.9	24.4	25.5	31.4	30.8	1.8
Physical Units per Household³						
Physical Units of Appliances Consumption per Household, Fuels Used:						
Electricity for:						
Refrigerators (kWh)	1,323	1,248	1,248	1,496	1,431	1.9
Other Appliances and Lighting (kWh)	5,412	4,609	5,288	6,287	6,913	1.8
Natural Gas (thousand cf)	9	9	9	11	9	4.8
LPG (gallons)	55	45	49	57	59	13.8

¹ Includes energy consumption for refrigeration and lighting.

² Based on the household respondent's description rather than the Federal Government definition.

³ Averages are for those households using each of the fuels for appliances.

(*) = Value rounds to zero in the units displayed.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE5-9c. Appliances¹ Energy Consumption in U.S. Households
by Northeast Census Region, 1997**

	Northeast Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Middle Atlantic	New England	
RSE Column Factor:	0.5	1.0	1.2	1.6	
Million Households					
Total U.S. Households	101.5	19.7	14.4	5.3	NF
Number of Households With Appliances, Fuels Used (more than one may apply):					
Electricity for:					
Refrigerators	101.3	19.7	14.4	5.3	NF
Other Appliances and Lighting	101.4	19.7	14.4	5.3	NF
Natural Gas	40.4	9.6	8.1	1.5	7.7
LPG	4.8	1.2	0.7	0.5	18.8
Quadrillion Btu					
Appliances Btu Consumption, Fuels Used:					
Electricity for:					
Refrigerators	0.46	0.07	0.05	0.02	2.4
Other Appliances and Lighting	1.87	0.30	0.22	0.08	2.5
Natural Gas	0.37	0.08	0.07	0.01	10.5
LPG	0.02	(*)	(*)	(*)	18.9
Total	2.73	0.45	0.34	0.11	1.8
Physical Units					
Physical Units of Appliances Consumption, Fuels Used:					
Electricity for:					
Refrigerators (billion kWh)	134	21	16	5	2.4
Other Appliances and Lighting (billion kWh)	549	87	64	23	2.5
Natural Gas (billion cf)	365	75	65	11	10.5
LPG (million gallons)	267	52	24	28	19.0
Million Btu per Household²					
Appliances Btu Consumption per Household, Fuels Used:					
Electricity for:					
Refrigerators	4.5	3.6	3.7	3.5	2.4
Other Appliances and Lighting	18.5	15.0	15.1	14.8	2.5
Natural Gas	9.3	8.1	8.2	7.4	3.2
LPG	5.1	4.0	3.2	5.3	11.6
Total	26.9	22.8	23.6	20.8	1.8
Physical Units per Household²					
Physical Units of Appliances Consumption per Household, Fuels Used:					
Electricity for:					
Refrigerators (kWh)	1,323	1,068	1,089	1,011	2.4
Other Appliances and Lighting (kWh)	5,412	4,406	4,430	4,341	2.5
Natural Gas (thousand cf)	9	8	8	7	3.2
LPG (gallons)	55	44	35	58	11.6

¹ Includes energy consumption for refrigeration and lighting.

² Averages are for those households using each of the fuels for appliances.

(*) = Value rounds to zero in the units displayed.

NF = No applicable RSE row factor.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE5-10c. Appliances¹ Energy Consumption in U.S. Households by Midwest Census Region, 1997

	Midwest Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			East North Central	West North Central	
RSE Column Factor:	0.5	1.0	1.2	1.7	
Million Households					
Total U.S. Households	101.5	24.1	16.9	7.2	NF
Number of Households With Appliances, Fuels Used (more than one may apply):					
Electricity for:					
Refrigerators	101.3	24.0	16.9	7.1	NF
Other Appliances and Lighting	101.4	24.1	16.9	7.2	NF
Natural Gas	40.4	11.7	9.1	2.5	5.5
LPG	4.8	1.3	0.6	0.6	22.3
Quadrillion Btu					
Appliances Btu Consumption, Fuels Used:					
Electricity for:					
Refrigerators	0.46	0.10	0.07	0.03	2.1
Other Appliances and Lighting	1.87	0.46	0.31	0.14	2.2
Natural Gas	0.37	0.11	0.09	0.02	8.3
LPG	0.02	0.01	(*)	Q	22.8
Total	2.73	0.68	0.48	0.20	2.1
Physical Units					
Physical Units of Appliances Consumption, Fuels Used:					
Electricity for:					
Refrigerators (billion kWh)	134	30	21	9	2.1
Other Appliances and Lighting (billion kWh)	549	134	92	42	2.2
Natural Gas (billion cf)	365	109	89	20	8.3
LPG (million gallons)	267	81	44	Q	22.8
Million Btu per Household²					
Appliances Btu Consumption per Household, Fuels Used:					
Electricity for:					
Refrigerators	4.5	4.3	4.2	4.5	2.1
Other Appliances and Lighting	18.5	19.0	18.6	20.0	2.2
Natural Gas	9.3	9.6	10.0	8.2	5.1
LPG	5.1	5.9	6.2	5.5	12.6
Total	26.9	28.2	28.4	28.0	2.1
Physical Units per Household²					
Physical Units of Appliances Consumption per Household, Fuels Used:					
Electricity for:					
Refrigerators (kWh)	1,323	1,251	1,218	1,329	2.1
Other Appliances and Lighting (kWh)	5,412	5,571	5,442	5,874	2.2
Natural Gas (thousand cf)	9	9	10	8	5.1
LPG (gallons)	55	64	68	60	12.7

¹ Includes energy consumption for refrigeration and lighting.

² Averages are for those households using each of the fuels for appliances.

(*) = Value rounds to zero in the units displayed.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE5-11c. Appliances¹ Energy Consumption in U.S. Households by South Census Region, 1997

	South Census Region					RSE Row Factors
	Total U.S.	Census Division			Total	
		South Atlantic	East South Central	West South Central		
RSE Column Factor:	0.5	0.9	1.4	1.2	1.4	
Million Households						
Total U.S. Households	101.5	35.9	18.7	6.3	10.8	NF
Number of Households With Appliances, Fuels Used (more than one may apply):						
Electricity for:						
Refrigerators	101.3	35.8	18.7	6.3	10.8	NF
Other Appliances and Lighting	101.4	35.9	18.7	6.3	10.8	NF
Natural Gas	40.4	9.6	3.5	1.2	4.9	8.7
LPG	4.8	1.7	0.8	0.5	0.4	20.2
Quadrillion Btu						
Appliances Btu Consumption, Fuels Used:						
Electricity for:						
Refrigerators	0.46	0.19	0.09	0.04	0.07	2.2
Other Appliances and Lighting	1.87	0.77	0.38	0.14	0.25	2.3
Natural Gas	0.37	0.10	0.03	0.01	0.05	12.7
LPG	0.02	0.01	(*)	(*)	(*)	23.3
Total	2.73	1.07	0.51	0.20	0.37	2.2
Physical Units						
Physical Units of Appliances Consumption, Fuels Used:						
Electricity for:						
Refrigerators (billion kWh)	134	57	27	10	19	2.2
Other Appliances and Lighting (billion kWh)	549	225	111	42	72	2.3
Natural Gas (billion cf)	365	95	32	12	51	12.7
LPG (million gallons)	267	100	43	33	24	23.3
Million Btu per Household²						
Appliances Btu Consumption per Household, Fuels Used:						
Electricity for:						
Refrigerators	4.5	5.4	4.9	5.5	6.1	2.2
Other Appliances and Lighting	18.5	21.4	20.3	22.8	22.7	2.3
Natural Gas	9.3	10.1	9.3	10.2	10.6	5.9
LPG	5.1	5.3	4.7	6.1	5.6	12.9
Total	26.9	29.8	27.1	30.8	33.8	2.2
Physical Units per Household²						
Physical Units of Appliances Consumption per Household, Fuels Used:						
Electricity for:						
Refrigerators (kWh)	1,323	1,579	1,437	1,625	1,796	2.2
Other Appliances and Lighting (kWh)	5,412	6,279	5,936	6,676	6,639	2.3
Natural Gas (thousand cf)	9	10	9	10	10	5.9
LPG (gallons)	55	58	52	67	62	12.9

¹ Includes energy consumption for refrigeration and lighting.

² Averages are for those households using each of the fuels for appliances.

(*) = Value rounds to zero in the units displayed.

NF = No applicable RSE row factor.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE5-12c. Appliances¹ Energy Consumption in U.S. Households by West Census Region, 1997

	West Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Mountain	Pacific	
RSE Column Factor:	0.5	1.0	1.7	1.3	
Million Households					
Total U.S. Households	101.5	21.8	6.2	15.6	NF
Number of Households With Appliances, Fuels Used (more than one may apply):					
Electricity for:					
Refrigerators	101.3	21.7	6.2	15.6	NF
Other Appliances and Lighting	101.4	21.8	6.2	15.6	NF
Natural Gas	40.4	9.5	1.9	7.5	5.1
LPG	4.8	0.7	0.2	0.4	22.2
Quadrillion Btu					
Appliances Btu Consumption, Fuels Used:					
Electricity for:					
Refrigerators	0.46	0.09	0.03	0.06	2.5
Other Appliances and Lighting	1.87	0.35	0.12	0.23	2.9
Natural Gas	0.37	0.09	0.01	0.07	7.9
LPG	0.02	(*)	(*)	(*)	23.5
Total	2.73	0.53	0.16	0.37	2.8
Physical Units					
Physical Units of Appliances Consumption, Fuels Used:					
Electricity for:					
Refrigerators (billion kWh)	134	26	8	18	2.5
Other Appliances and Lighting (billion kWh)	549	103	34	69	2.9
Natural Gas (billion cf)	365	85	14	71	7.9
LPG (million gallons)	267	34	14	20	23.5
Million Btu per Household²					
Appliances Btu Consumption per Household, Fuels Used:					
Electricity for:					
Refrigerators	4.5	4.1	4.4	4.1	2.5
Other Appliances and Lighting	18.5	16.1	18.7	15.1	2.9
Natural Gas	9.3	9.3	7.4	9.8	5.0
LPG	5.1	4.7	5.5	4.3	12.9
Total	26.9	24.4	25.6	23.9	2.8
Physical Units per Household²					
Physical Units of Appliances Consumption per Household, Fuels Used:					
Electricity for:					
Refrigerators (kWh)	1,323	1,213	1,280	1,187	2.5
Other Appliances and Lighting (kWh)	5,412	4,717	5,488	4,411	2.9
Natural Gas (thousand cf)	9	9	7	9	5.0
LPG (gallons)	55	52	60	47	12.9

¹ Includes energy consumption for refrigeration and lighting.

² Averages are for those households using each of the fuels for appliances.

(*) = Value rounds to zero in the units displayed.

NF = No applicable RSE row factor.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

1997 Consumption and Expenditures Tables

Appliances Expenditures Tables

(10 pages, 40 kb)

Contents

Pages

CE5-1e. Appliances Energy Expenditures in U.S. Households by Climate Zone, 1997	1
CE5-2e. Appliances Energy Expenditures in U.S. Households by Year of Construction, 1997	1
CE5-3e. Appliances Energy Expenditures in U.S. Households by Household Income, 1997	1
CE5-4e. Appliances Energy Expenditures in U.S. Households by Type of Housing Unit, 1997	1
CE5-7e. Appliances Energy Expenditures in U.S. Households by Four Most Populated States, 1997	1
CE5-8e. Appliances Energy Expenditures in U.S. Households by Urban/Rural Location, 1997	1
CE5-9e. Appliances Energy Expenditures in U.S. Households by Northeast Census Region, 1997	1
CE5-10e. Appliances Energy Expenditures in U.S. Households by Midwest Census Region, 1997	1
CE5-11e. Appliances Energy Expenditures in U.S. Households by South Census Region, 1997	1
CE5-12e. Appliances Energy Expenditures in U.S. Households by West Census Region, 1997	1

These data are from the 1997 Residential Energy Consumption Survey (RECS) which provides information on the use of energy in residential housing units in the United States. The RECS is a national statistical survey that collects data for occupied primary housing units. RECS was first conducted in 1978; the sixth and most recent survey was conducted in 1997 RECS. The data were collected from a sample of 5,900 housing units statistically selected to represent the 101.5 million units in the United States. The 1997 data are available for the four Census regions, the nine Census divisions, and for the four most populous States--California, Florida, New York, and Texas.

Data provided here are in the public domain and may be reproduced without permission. Appropriate credit would be appreciated. A suggested citation is "U.S. Department of Energy, Energy Information Administration, *"A Look at Residential Energy Consumption in 1997."*

Electronic Products and Services

Users can view and download selected pages or entire reports, search for information, download data and analysis applications, and find out about new information products and services.

Contact: Robert Latta, Survey Manager (rlatta@eia.doe.gov)

World Wide Web: <http://www.eia.doe.gov/emeu/consumption>

Table CE5-1e. Appliances¹ Energy Expenditures in U.S. Households by Climate Zone, 1997

	Climate Zone ²						RSE Row Factors
	Total	Fewer than 2,000 CDD and --				2,000 CDD or More and Fewer than 4,000 HDD	
		More than 7,000 HDD	5,500 to 7,000 HDD	4,000 to 5,499 HDD	Fewer than 4,000 HDD		
RSE Column Factor:	0.4	1.8	1.0	1.1	1.2	1.2	
Million Households							
Total U.S. Households	101.5	9.3	28.0	22.5	19.5	22.2	7.8
Number of Households With Appliances, Fuels Used (more than one may apply):							
Electricity for:							
Refrigerators	101.3	9.2	28.0	22.5	19.5	22.1	7.9
Other Appliances and Lighting	101.4	9.2	28.0	22.5	19.5	22.2	7.8
Natural Gas	40.4	2.5	13.2	8.9	8.4	7.3	8.6
LPG	4.8	0.9	1.1	1.0	0.8	0.9	24.1
Billion Dollars							
Appliances Expenditures, Fuels Used:							
Electricity for:							
Refrigerators	12.14	0.85	3.14	2.66	2.34	3.14	6.7
Other Appliances and Lighting	48.44	4.20	13.62	10.83	8.60	11.18	7.1
Natural Gas	2.86	0.13	0.86	0.74	0.55	0.58	10.9
LPG	0.36	0.07	0.09	0.07	0.07	0.07	25.3
Total	63.80	5.25	17.71	14.30	11.56	14.98	6.9
Dollars per Household³							
Appliances Expenditures per Household, Fuels Used:							
Electricity for:							
Refrigerators	120	92	112	118	121	142	2.9
Other Appliances and Lighting	477	455	486	481	441	504	2.7
Natural Gas	71	51	65	83	66	80	5.8
LPG	75	71	78	72	81	74	11.4
Total	629	567	632	636	593	675	2.7

¹ Includes energy expenditures for refrigeration and lighting.

² One of five climatically distinct areas, determined according to the 30-year average (1961-1990) of the annual heating and cooling degree-days. For this report, the heating or cooling degree-days are a measure of how cold or how hot a location is over a period of one year, relative to a base temperature of 65 degrees Fahrenheit. A household is assigned to a climate zone according to the 30-year average annual degree-days for an appropriate nearby weather station.

³ Averages are for those households using each of the fuels for appliances.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE5-2e. Appliances¹ Energy Expenditures in U.S. Households by Year of Construction, 1997

	Total	Year of Construction						RSE Row Factors
		1990 to 1997 ²	1980 to 1989	1970 to 1979	1960 to 1969	1950 to 1959	1949 or Before	
RSE Column Factor:	0.4	1.8	1.4	1.0	1.0	1.1	0.8	
Million Households								
Total U.S. Households	101.5	9.7	17.3	19.6	14.4	12.5	27.9	4.1
Number of Households With Appliances, Fuels Used (more than one may apply):								
Electricity for:								
Refrigerators	101.3	9.7	17.3	19.5	14.4	12.5	27.8	4.1
Other Appliances and Lighting	101.4	9.7	17.3	19.6	14.4	12.5	27.9	4.1
Natural Gas	40.4	2.9	4.4	5.2	5.3	6.5	16.1	7.5
LPG	4.8	0.5	0.8	0.9	0.8	0.2	1.6	17.1
Billion Dollars								
Appliances Expenditures, Fuels Used:								
Electricity for:								
Refrigerators	12.14	1.07	2.08	2.31	1.79	1.62	3.27	4.6
Other Appliances and Lighting	48.44	5.05	8.59	9.48	6.66	5.99	12.67	4.4
Natural Gas	2.86	0.27	0.36	0.34	0.35	0.44	1.11	10.6
LPG	0.36	0.05	0.06	0.07	0.05	0.01	0.12	21.4
Total	63.80	6.44	11.09	12.19	8.85	8.05	17.17	4.4
Dollars per Household³								
Appliances Expenditures per Household, Fuels Used:								
Electricity for:								
Refrigerators	120	111	121	118	124	129	117	2.6
Other Appliances and Lighting	477	521	496	485	461	477	454	2.5
Natural Gas	71	92	82	65	65	68	69	6.4
LPG	75	98	73	71	68	49	79	13.2
Total	629	664	641	623	613	642	615	2.4

¹ Includes energy expenditures for refrigeration and lighting.

² New construction for 1997 includes only those housing units built and occupied between January and the April-August period when the household interviews were conducted.

³ Averages are for those households using each of the fuels for appliances.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE5-3e. Appliances¹ Energy Expenditures in U.S. Households by Household Income, 1997

	Total	1997 Household Income				Below Poverty Line	Eligible for Federal Assistance ²	RSE Row Factors
		Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 or More			
RSE Column Factor:	0.6	1.5	1.0	0.9	1.0	1.3	1.0	
Million Households								
Total U.S. Households	101.5	13.3	29.1	31.1	27.9	14.6	34.1	2.7
Number of Households With Appliances, Fuels Used (more than one may apply):								
Electricity for:								
Refrigerators	101.3	13.2	29.1	31.1	27.9	14.6	34.0	2.7
Other Appliances and Lighting	101.4	13.3	29.1	31.1	27.9	14.6	34.0	2.7
Natural Gas	40.4	5.8	11.3	11.7	11.7	6.8	14.7	4.8
LPG	4.8	0.7	1.6	1.4	1.1	0.8	1.9	14.7
Billion Dollars								
Appliances Expenditures, Fuels Used:								
Electricity for:								
Refrigerators	12.14	1.36	3.15	3.55	4.07	1.52	3.61	3.2
Other Appliances and Lighting	48.44	4.12	11.36	14.92	18.04	5.42	13.02	3.2
Natural Gas	2.86	0.41	0.62	0.88	0.95	0.52	1.01	6.8
LPG	0.36	0.05	0.11	0.09	0.11	0.05	0.14	18.1
Total	63.80	5.94	15.25	19.44	23.17	7.51	17.78	3.1
Dollars per Household³								
Appliances Expenditures per Household, Fuels Used:								
Electricity for:								
Refrigerators	120	103	108	114	146	104	106	2.0
Other Appliances and Lighting	477	310	390	479	646	370	382	2.0
Natural Gas	71	71	55	75	81	76	69	4.6
LPG	75	65	70	67	100	60	77	11.0
Total	629	446	523	624	830	512	522	1.9

¹ Includes energy expenditures for refrigeration and lighting.

² Below 150 percent of poverty line or 60 percent of median State income.

³ Averages are for those households using each of the fuels for appliances.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE5-4e. Appliances¹ Energy Expenditures in U.S. Households
by Type of Housing Unit, 1997**

	Total	Type of Housing Unit				RSE Row Factors
		Single-Family	Multifamily		Mobile Home	
			Two to Four Units	Five or More Units		
RSE Column Factor:	0.5	0.5	1.9	1.2	1.6	
Million Households						
Total U.S. Households	101.5	73.7	5.6	15.8	6.3	4.0
Number of Households With Appliances, Fuels Used (more than one may apply):						
Electricity for:						
Refrigerators	101.3	73.7	5.6	15.7	6.3	4.0
Other Appliances and Lighting	101.4	73.7	5.6	15.8	6.3	4.0
Natural Gas	40.4	30.4	2.7	5.4	1.8	6.9
LPG	4.8	3.4	Q	Q	1.3	16.2
Billion Dollars						
Appliances Expenditures, Fuels Used:						
Electricity for:						
Refrigerators	12.14	9.55	0.57	1.43	0.59	4.2
Other Appliances and Lighting	48.44	39.93	1.79	4.17	2.54	4.0
Natural Gas	2.86	2.25	0.15	0.37	0.09	8.8
LPG	0.36	0.26	Q	Q	0.10	19.4
Total	63.80	51.98	2.52	5.97	3.32	3.9
Dollars per Household²						
Appliances Expenditures per Household, Fuels Used:						
Electricity for:						
Refrigerators	120	130	102	91	93	2.5
Other Appliances and Lighting	477	542	319	264	402	2.3
Natural Gas	71	74	56	68	47	5.1
LPG	75	75	Q	Q	76	8.7
Total	629	705	449	378	525	2.1

¹ Includes energy expenditures for refrigeration and lighting.

² Averages are for those households using each of the fuels for appliances.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE5-7e. Appliances¹ Energy Expenditures in U.S. Households by Four Most Populated States, 1997

	Total U.S.	Four Most Populated States				RSE Row Factors
		New York	California	Texas	Florida	
RSE Column Factor:	0.4	0.9	1.0	1.7	1.7	
Million Households						
Total U.S. Households	101.5	6.8	11.5	7.0	5.9	NF
Number of Households With Appliances, Fuels Used (more than one may apply):						
Electricity for:						
Refrigerators	101.3	6.8	11.4	7.0	5.9	NF
Other Appliances and Lighting	101.4	6.8	11.5	7.0	5.9	NF
Natural Gas	40.4	4.2	7.3	3.1	0.6	7.1
LPG	4.8	0.5	0.3	0.3	0.3	23.2
Billion Dollars						
Appliances Expenditures, Fuels Used:						
Electricity for:						
Refrigerators	12.14	1.00	1.54	1.01	0.84	3.5
Other Appliances and Lighting	48.44	3.85	5.04	3.61	3.06	4.1
Natural Gas	2.86	0.44	0.48	0.23	Q	8.3
LPG	0.36	0.04	0.02	0.02	0.02	30.4
Total	63.80	5.33	7.08	4.88	4.05	3.9
Dollars per Household²						
Appliances Expenditures per Household, Fuels Used:						
Electricity for:						
Refrigerators	120	147	134	146	141	3.5
Other Appliances and Lighting	477	564	440	518	516	4.1
Natural Gas	71	104	66	75	201	8.1
LPG	75	78	60	73	85	13.7
Total	629	781	616	700	683	3.9

¹ Includes energy expenditures for refrigeration and lighting.

² Averages are for those households using each of the fuels for appliances.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE5-8e. Appliances¹ Energy Expenditures in U.S. Households by Urban/Rural Location, 1997

	Urban/Rural Location ²					RSE Row Factors
	Total	City	Town	Suburbs	Rural	
	0.5	0.8	1.4	1.4	1.3	
Million Households						
Total U.S. Households	101.5	48.2	18.2	18.6	16.5	4.0
Number of Households With Appliances, Fuels Used (more than one may apply):						
Electricity for:						
Refrigerators	101.3	48.1	18.2	18.6	16.4	4.0
Other Appliances and Lighting	101.4	48.2	18.2	18.6	16.4	4.0
Natural Gas	40.4	23.9	6.1	8.0	2.4	6.4
LPG	4.8	0.5	0.8	0.3	3.2	16.8
Billion Dollars						
Appliances Expenditures, Fuels Used:						
Electricity for:						
Refrigerators	12.14	5.61	2.05	2.54	1.94	4.0
Other Appliances and Lighting	48.44	20.08	8.54	10.52	9.30	3.8
Natural Gas	2.86	1.61	0.39	0.68	0.18	9.2
LPG	0.36	0.04	0.06	0.03	0.23	20.8
Total	63.80	27.34	11.05	13.76	11.65	3.8
Dollars per Household³						
Appliances Expenditures per Household, Fuels Used:						
Electricity for:						
Refrigerators	120	117	113	137	118	2.2
Other Appliances and Lighting	477	416	469	566	566	2.0
Natural Gas	71	67	64	85	74	5.5
LPG	75	81	70	104	73	12.3
Total	629	567	607	741	708	2.0

¹ Includes energy expenditures for refrigeration and lighting.

² Based on the household respondent's description rather than the Federal Government definition.

³ Averages are for those households using each of the fuels for appliances.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE5-9e. Appliances¹ Energy Expenditures in U.S. Households by Northeast Census Region, 1997

	Northeast Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Middle Atlantic	New England	
RSE Column Factor:	0.6	0.9	1.1	1.8	
Million Households					
Total U.S. Households	101.5	19.7	14.4	5.3	NF
Number of Households With Appliances, Fuels Used (more than one may apply):					
Electricity for:					
Refrigerators	101.3	19.7	14.4	5.3	NF
Other Appliances and Lighting	101.4	19.7	14.4	5.3	NF
Natural Gas	40.4	9.6	8.1	1.5	7.7
LPG	4.8	1.2	0.7	0.5	18.8
Billion Dollars					
Appliances Expenditures, Fuels Used:					
Electricity for:					
Refrigerators	12.14	2.62	1.96	0.66	2.5
Other Appliances and Lighting	48.44	10.57	7.74	2.83	2.4
Natural Gas	2.86	0.86	0.73	0.12	9.0
LPG	0.36	0.10	0.05	0.05	17.2
Total	63.80	14.15	10.49	3.66	2.2
Dollars per Household²					
Appliances Expenditures per Household, Fuels Used:					
Electricity for:					
Refrigerators	120	133	136	124	2.5
Other Appliances and Lighting	477	536	537	533	2.4
Natural Gas	71	89	90	85	2.8
LPG	75	87	74	107	8.8
Total	629	717	727	690	2.2

¹ Includes energy expenditures for refrigeration and lighting.

² Averages are for those households using each of the fuels for appliances.

NF = No applicable RSE row factor.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals. • See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE5-10e. Appliances¹ Energy Expenditures in U.S. Households by Midwest Census Region, 1997

	Midwest Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			East North Central	West North Central	
	0.5	1.0	1.2	1.6	
RSE Column Factor:					
Million Households					
Total U.S. Households	101.5	24.1	16.9	7.2	NF
Number of Households With Appliances, Fuels Used (more than one may apply):					
Electricity for:					
Refrigerators	101.3	24.0	16.9	7.1	NF
Other Appliances and Lighting	101.4	24.1	16.9	7.2	NF
Natural Gas	40.4	11.7	9.1	2.5	5.5
LPG	4.8	1.3	0.6	0.6	22.3
Billion Dollars					
Appliances Expenditures, Fuels Used:					
Electricity for:					
Refrigerators	12.14	2.61	1.87	0.74	2.6
Other Appliances and Lighting	48.44	11.42	8.20	3.23	2.8
Natural Gas	2.86	0.65	0.53	0.13	8.3
LPG	0.36	0.09	0.05	Q	24.0
Total	63.80	14.77	10.64	4.13	2.6
Dollars per Household²					
Appliances Expenditures per Household, Fuels Used:					
Electricity for:					
Refrigerators	120	109	111	103	2.6
Other Appliances and Lighting	477	475	485	451	2.8
Natural Gas	71	56	58	50	5.3
LPG	75	69	75	62	12.2
Total	629	614	629	577	2.6

¹ Includes energy expenditures for refrigeration and lighting.

² Averages are for those households using each of the fuels for appliances.

NF = No applicable RSE row factor.

Q = Data withheld either because the Relative Standard Error (RSE) was greater than 50 percent or fewer than 10 households were sampled.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

**Table CE5-11e. Appliances¹ Energy Expenditures in U.S. Households
by South Census Region, 1997**

	South Census Region					RSE Row Factors
	Total U.S.	Census Division				
		Total	South Atlantic	East South Central		
RSE Column Factor:	0.4	0.9	1.4	1.2	1.4	
Million Households						
Total U.S. Households	101.5	35.9	18.7	6.3	10.8	NF
Number of Households With Appliances, Fuels Used (more than one may apply):						
Electricity for:						
Refrigerators	101.3	35.8	18.7	6.3	10.8	NF
Other Appliances and Lighting	101.4	35.9	18.7	6.3	10.8	NF
Natural Gas	40.4	9.6	3.5	1.2	4.9	8.7
LPG	4.8	1.7	0.8	0.5	0.4	20.2
Billion Dollars						
Appliances Expenditures, Fuels Used:						
Electricity for:						
Refrigerators	12.14	4.41	2.21	0.67	1.53	2.9
Other Appliances and Lighting	48.44	17.32	9.03	2.72	5.57	2.7
Natural Gas	2.86	0.76	0.33	0.09	0.34	14.2
LPG	0.36	0.13	0.07	0.04	0.02	24.3
Total	63.80	22.62	11.65	3.51	7.46	2.6
Dollars per Household²						
Appliances Expenditures per Household, Fuels Used:						
Electricity for:						
Refrigerators	120	123	118	105	141	2.9
Other Appliances and Lighting	477	483	483	428	514	2.7
Natural Gas	71	79	94	72	70	8.4
LPG	75	77	87	72	63	12.9
Total	629	631	623	553	689	2.6

¹ Includes energy expenditures for refrigeration and lighting.

² Averages are for those households using each of the fuels for appliances.

NF = No applicable RSE row factor.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.

Table CE5-12e. Appliances¹ Energy Expenditures in U.S. Households by West Census Region, 1997

	West Census Region				RSE Row Factors
	Total U.S.	Total	Census Division		
			Mountain	Pacific	
	0.5	1.0	1.9	1.1	
RSE Column Factor:					
Million Households					
Total U.S. Households	101.5	21.8	6.2	15.6	NF
Number of Households With Appliances, Fuels Used (more than one may apply):					
Electricity for:					
Refrigerators	101.3	21.7	6.2	15.6	NF
Other Appliances and Lighting	101.4	21.8	6.2	15.6	NF
Natural Gas	40.4	9.5	1.9	7.5	5.1
LPG	4.8	0.7	0.2	0.4	22.2
Billion Dollars					
Appliances Expenditures, Fuels Used:					
Electricity for:					
Refrigerators	12.14	2.50	0.63	1.87	3.0
Other Appliances and Lighting	48.44	9.12	2.57	6.56	3.2
Natural Gas	2.86	0.59	0.09	0.50	9.0
LPG	0.36	0.04	0.02	0.02	24.8
Total	63.80	12.25	3.30	8.96	3.0
Dollars per Household²					
Appliances Expenditures per Household, Fuels Used:					
Electricity for:					
Refrigerators	120	115	102	120	3.0
Other Appliances and Lighting	477	419	416	420	3.2
Natural Gas	71	62	45	67	6.0
LPG	75	61	68	57	11.5
Total	629	562	534	573	3.0

¹ Includes energy expenditures for refrigeration and lighting.

² Averages are for those households using each of the fuels for appliances.

NF = No applicable RSE row factor.

Notes: • To obtain the RSE percentage for any table cell, multiply the corresponding column and row factors. • Because of rounding, data may not sum to totals.

• See "Glossary" for definition of terms used in this report.

Source: Energy Information Administration, Office of Energy Markets and End Use, Forms EIA-457 A-G of the 1997 Residential Energy Consumption Survey.